



SettleMint

**Building
Blockchain
applications
just got easier**

“We make it easy to build and integrate Blockchain business solutions with our distributed middleware Mint.”



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MINT, THE DISTRIBUTED BLOCKCHAIN MIDDLEWARE

Mint accelerates the implementation of Blockchain use cases by abstracting away the hurdles of the technology for your developers

Mint accelerates your deployment of Blockchain into your IT architecture or business case by abstracting away the technology on three levels. Enable your IT teams to launch production grade Blockchain based systems in weeks instead of months.

Improve your time to market

Using the Mint middleware, your Blockchain application can be deployed in production in weeks, not months.

Exceptional developer experience

Built for and by developers, the Mint middleware provides a complete set of developer-friendly tools and technologies that makes working with it a snap.

Benefit from years of R&D

We have spend years on R&D in the Blockchain space and have deployed a multitude of production apps together with our clients.

Allowing businesses worldwide to take advantage of Blockchain.





Mint, a multi-tiered Blockchain wrapper.

Level 0: Infrastructure wrapper

Deployment in any infrastructure in just a few clicks

- Dockerized network nodes with IPFS included
- One click SaaS deployments using Kubernetes
- Horizontally scalable microservices for peak performances
- 100% infrastructure agnostic (Azure, AWS, Digital Ocean, BlueMix and premise compatible) on support for managed BaaS Offerings (Azure, AWS, etc)
- Support of Ethereum, EWF, BigchainDB, Bitcoin, Quorum, ArabianChain.

Level 1: Template Library

Use cases & base components for low-code environment means use cases deployed in weeks not months

- Provenance tracking
- Document registration and authentication
- Asset Tokenisation: standards for fungible tokens, non-fungible, partially fungible tokens
- Token curated registries
- Role-based authentication
- Upgradeable smart contracts

Level 2: Distributed API (dAPI) & connectors

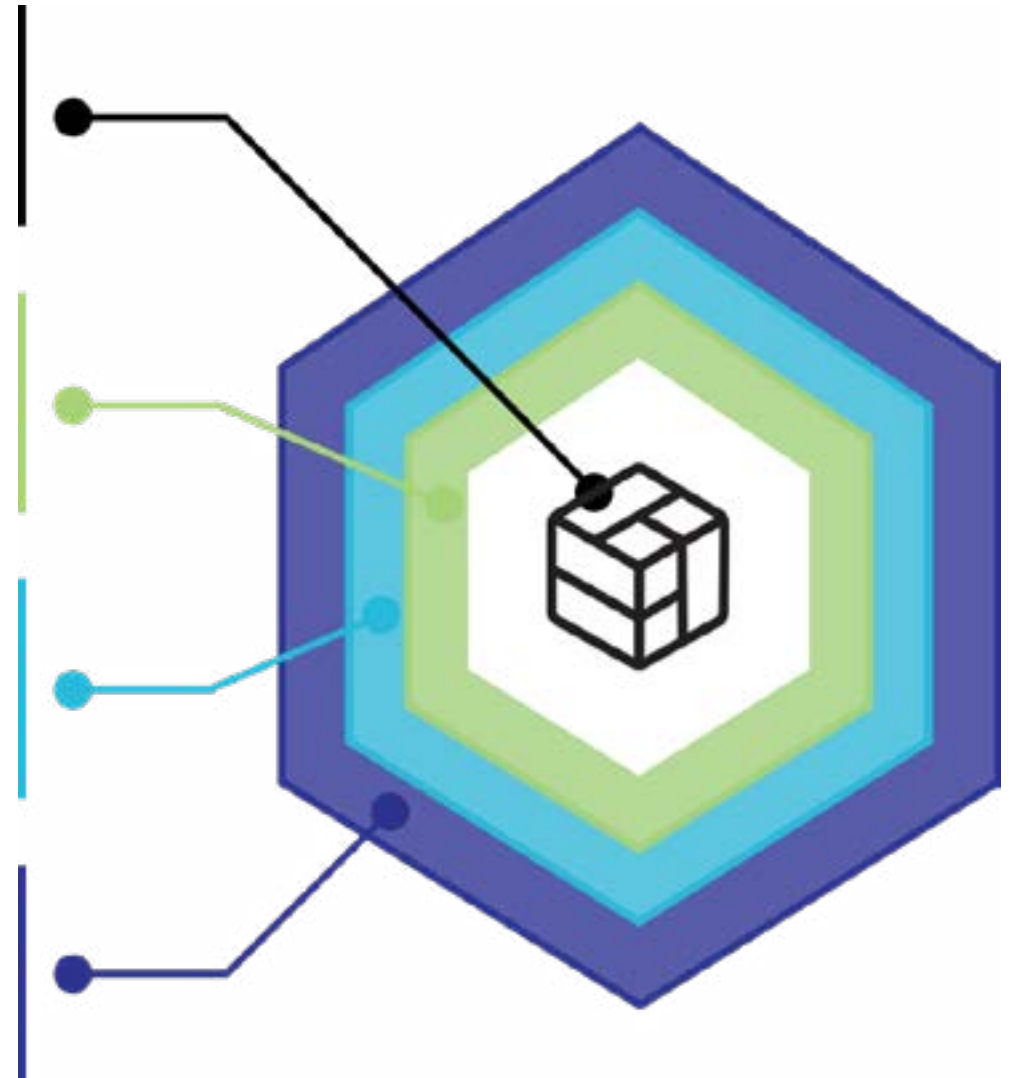
Zero config API layer for seamless integration

- Zero-configuration REST API for smart contracts
- Secure wallet and account abstraction
- IPFS integration for file and metadata storage
- External systems connections via webhooks
- Blockchain indexer
- Smart contracts data mirror in DB
- Encryption & decryption endpoints

Level 3: Distributed APP (dAPP)

Zero config UI for admin and developer access

- Admin user interface for user accounts and roles
- UI to create, issue & digital assets
- UI to create, issue & digital twins
- API documentation using Swagger
- Full debugging support and Blockchain explorer
- Blockchain statistics dashboard



**BUSINESS SOLUTIONS
BASED ON MINT**

Bridging the gap between your business & Blockchain technology



Mint for Supply Chain & Document Tracking

Securely track & manage any
asset, supply chain, contract
or flow through an on-chain
workflow engine.

**Speed up your
development time**

hello@settlemint.com

Benefits

Optimization of processes
& transparency with Blockchain

What can it do?

You can diminish your overhead costs, it enables companies to work together and make that trust digital.

In the field

SettleMint is collaborating with VIA Don Bosco, an NGO that subsidizes education in Africa and Latin-America, to help them dramatically decrease their admin burden and cost. NGO's face a lot of challenges, managing large amounts of money often confronted with corruption and fraud. Admin follow-up is time and money consuming. Blockchain technology was introduced and optimised their admin processes and eliminated opportunities for fraudulent use of funds. Previously the validation and verification of the financial information for each school took up to six months. This is now reduced to seconds. Blockchain technology is tamper free and results in a win-win situation resolving many of the NGO's challenges.

Technology

Blockchain is a public distributed record of transactions. It works on a peer-to-peer network. Whenever someone makes a transaction, it is broadcasted to the network and the computers run complex algorithms to determine if the transaction is valid. It is added to the record of transactions linking it to the previous transaction, thus making it a chronological order of events. If you want to manipulate it, you need to manipulate it on thousands of computers at once. So far, no one has managed to come close to ever hacking a public Blockchain.



Mint for Asset Tokenization

A full featured platform for the management & issuance of smart cryptocurrencies, tokens & assets.

Benefits

Tokenize your ecosystem

Security

Smart contracts, advanced cryptography and best of breed Blockchain networks ensure a completely secure environment with full real time insights into the entire system.

Smart assets

Smart contracts add the capabilities to create smart assets with rules that transcend what was possible with traditional systems, including the ability to settle transactions immediately.

Optimized

By enforcing compliance with pre-defined rules up front via smart contracts, most of these systems can exist without any administrative overhead and benefit from built in compliance and audibility.

Fungibility

Mint supports Fungible, Non-Fungible and Partially Fungible tokens on public, consortium or private network setups based on Ethereum.

Tokenize your ecosystem

Give us a shout for a demo!

hello@settlemint.com

What can it do?

A few common use cases enabled by Mint

Shared Ownership

Fractional ownership of real world assets. The sharing economy will become increasingly prevalent in our lives. Sharing costs, revenue, ownership and accountability between parties.

Loyalty points

Loyalty programs can increase customer engagement levels. A decentralised loyalty program facilitates seamless cross organisation coordination in the program.

Smart Currency

Smart money is the next revolution in our financial system. From non-fungible currencies to currencies that behave differently depending on the context they are used in will open possibilities for autonomous management and new business models.

Financial Instruments

Create bonds, stocks, certificates and more complex financial assets like turbos and trackers on a Blockchain and leverage the inherent benefits ranging from shareholder management, to instant settlement.

In the field

SettleMint is sculpting a new financial landscape. An example is setting up Sharia-compliant financial products for the Islamic Development Bank Group. They needed a transparent, stable and trustworthy financial system to apply on Sharia-compliant products to be used in all the 57 IsDB member countries. The smart contracts are easy to verify, immutable and secure, which saves the Islamic institutions time and energy on administration and legal research of those financial products. Electronic contracts are Sharia-compliant and approved since 1990 by the International Fiqh Academy.

Technology

Build upon these best of breed components to bring your token economy use cases to life

Consortium Ethereum

Enterprise Blockchain applications most often run in consortium networks. Building on the Parity Ethereum client it becomes easy to either run your own consortium chain or use the semi-public Mint-Net network.

Role based permissions

Using the role-based permission system in the smart contract template library combined with the secret contracts feature in the Parity Blockchain client, it becomes possible to implement granular access rights and private agreements



Mint for Energy

Providing Energy Industry players with the required components to bring their ideas for the next generation of energy markets to life today.

Benefits

Jumpstart your energy Blockchain use case

Seamless integration

With Mint, your internal development teams can connect and set up your brand new idea to energy Blockchain use case quickly and independently, without having to deal with the complexities of the technology.

Smart Contract Library

The Mint smart contract library ensures that you remain fully sovereign of your Blockchain-based solution while maximally benefitting from best practices and SettleMint's Blockchain experience.

EWf compatible

Our functionality clusters contain a broad range of Energy Web Foundation compatible functionalities like energy origin certificates, provenance tracking, identity management, energy exchange and tokenisation of energy.

Let's get you started

Give us a shout for a demo!

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What can it do?

A few common use cases enabled by Mint for Energy

Energy Certificates of Origin

Exchange transferable certificates that are immutably attached to the units of energy they produce or consume. Track down the energy they trade and verify if it is compliant with the types of energy requirements you manage in your application.

Energy Marketplace

Improve access to energy efficiency & load-altering mechanisms by giving them access to a marketplace for Distributed Energy Resources. Prosumers will be able to exchange their surplus of energy whereas consumers will be able to monitor their consumption closely.

Energy Tokenisation

Create greater social value and support bottom-up transition toward a cleaner, robust, more efficient and transparent energy market. Keep control of the token

economics while having access to the best practices for token generation, management and exchange.

Microgrids

Connect local electricity sources to your P2P platform and give communities what they need to exchange off-grid energy. You gain the unique possibility to process micro-transactions regardless of the quantity.

In the field

SettleMint is working together with Activity and ELIA on a pilot project to develop a decentralised flexible management solution based on Blockchain technology. To keep the Belgian electricity grid balanced, energy distributors, like Elia, need a new way to balance out the generation and consumption of energy. It requires a lot of flexibility in the validation and recording of contracts with all the actors in the financial system.

Technology

Build upon these best of breed components to bring your energy use cases to life

Connect to Energy Web Chain

Enter the world's largest opensource Blockchain energy ecosystem. It gives you the unique opportunity to experiment on the Blockchain, benefit from their fast, light and advanced network without the integration complexity.

Enhanced smart contracts

Leveraging the developer friendly REST APIs to interact with the smart contracts, query the data in the system and connect the contracts with the world by leveraging the oracle and event webhook systems.

Role based permissions

The smart contract template library combined with the secret contracts feature in the Parity Blockchain client powering Tobalaba, to implement granular access rights and private agreements on chain.



Mint for Democracy

Get a grip on your governance

Technology

Immutable voting

All votes are linked uniquely to a single version of the documents to be voted upon and sealed immutably in the Blockchain. This ensures that votes cast on a document are cast on the final document.

BallotBox

BallotBox is a collection of reusable components and templates that encompasses the recording and securing of votes and proposals using Blockchain technologies. It is extremely secure, allowing for 2 factor authentication and more, and complying with all security regulations.

Usage

The functionalities are wrapped into a user-friendly and web-based responsive application that can be used on mobile devices tablets and desktop computers.

Let's get you started

Give us a shout for a demo!

hello@settlemint.com

Benefits

Integrity of governance

Making sure your vote counts

The GovernMint dAPP leverages the unique and immutable properties of the Blockchain technology to enable you to take full control of your governance. By recording your decisions, process, remarks, votes and conclusions in an immutable and verifiable fashion, you can reconstruct the entire decision-making process at any time.

Security

Secure the authenticity and integrity of your vote by utilising the timestamping, hashing and cryptographic signing features that form the basis of Blockchain technology. We are also moving away from the captured images of handwritten signatures and will be using cryptographic methods of signing. These signatures are based on unbreakable Elliptic Curve public and private keys and offer a much more secure manner of signing.

Mint for Democracy in action: Indonesia Elections 2019

Indonesia's elections are not just large, they are probably the most complicated in the world with 193 million voters spread over 17 000 islands. Counting the votes from 813 350 polling stations takes weeks, and traditionally tensions rise in the weeks between the vote and the publication of the official results, with both sides accusing the other side of tampering.

Votes and vote counts not only have to travel far and wide geographically, they also need to go through five levels of aggregating before they are counted in the national election. A lot can happen to a vote on that journey, and that is where Blockchain can help.

So we set up the largest ever Blockchain application for elections to date. On April 17, 2019 "Democracy Anchored" was able to report on 25 million votes in the Indonesian elections within hours after the polling stations closed. This is weeks before the official results became public (on May 21st). This shows that Blockchain can be incredibly valuable in large scale elections—as long as you don't try to replace paper voting, or maybe combine it in the digital voting.

What's more, everyone can check this for themselves on the publicly available website:

<https://indonesia2019.ballotbox.eu>



Notarize and authenticate
your data online.
CertiMint enables everyone
to prove the existence,
integrity and signature
of any document or data.
Powered by Blockchain.

What can it do?

Prove beyond any doubt that your data and files existed at a certain time, that they have not been modified and that they were signed by certain individuals

Proof of existence

Anchoring on Blockchain enables you to ensure and certify that a document or dataset existed at a particular point in time. Crucial for contracts, research data, medical records and logs.

Proof of integrity

At any point in the future, you can recreate the hash of any data or file to prove that you have the authenticity of your copy.

Proof of signature

While your data is not stored in the Blockchain, the proofs of the integrity, existence, ownership and signatures can be independently verified by anyone, at any time.

Let's get you started

Give us a shout for a demo!

hello@certimint.com

Benefits

Upping the game of enterprise data security

Security

Secure the authenticity and integrity of your data by anchoring it on the public Ethereum network where thousands of computers provide a level of security that no supercomputer could break.

Privacy

Using cryptographic algorithms (hashing), only a unique fingerprint of your data is embedded in the Blockchain. No data can be recovered from these fingerprints.

Transparency

While your data is not stored in the Blockchain, the proofs of the integrity, existence, and ownership can be independently verified by anyone, at any time.

Technology

Integrate CertiMint and Blockchain based data anchoring into your application in four easy steps

01.

Prepare your data

Choose to either send files or JSON data object to the CertiMint API, or keep your data completely private by hashing it before sending it through, a puter could break.

02.

Transmit your data to the API

Transmitting the data or hashes to the API via a simple REST API call. You will get a seal identifier back for use in step three.

03.

Merkle trees and anchoring

CertiMint will then bundle up your hashes into a Merkle Tree and anchor this tree into the Ethereum Blockchain.

04.

Retrieve the crypto seals

Your application can now poll or be notified by web hooks to retrieve the cryptoseals for each item when it has been anchored on the Blockchain.

MINT VALUE ADDED RESELLER

What's in it for you?

Expand your offer to your customers

Blockchain is booming! Admittedly, we may be a bit biased. But we don't expect you to take our word for it ... the numbers speak for themselves. A 2018 Gartner survey showed that 9% of the companies had already invested in Blockchain, or were actively experimenting with the technology. A number that will rise to 25 or even 30% in the next 3 to 5 years, whereas the mass market (an additional 40%) will follow later. According to IDC, this will cause the enterprise spending on Blockchain to explode, from 2.9 billion USD in 2019 to a staggering 11.7 billion USD in 2022. And that is just the beginning, as more and more business sectors will be taking their first Blockchain steps in the years to come, following the example of telcos, banks, and IoT projects. This means that new and existing customers will increasingly be asking you about Blockchain.

As a Value Added Reseller of Mint, our acclaimed Blockchain solution, you will be in the driving seat when it comes to digital innovation.

Enabling you to give these customers expert advice on cutting-edge solutions, and providing you with an extra tool to help them realize their objectives. This will give you a head start on your competitors, ultimately resulting in new business opportunities and higher revenue.

Acceleration & Support Program

We have set up an ingenious acceleration program to get you started. We will be helping you with the qualification of possible leads. And our Blockchain Academy – for developers as well as commercial staff – will give you the necessary training to approach clients with a healthy dose of knowledge and know-how and to steer the projects internally in the right direction.

But our support doesn't stop there; it goes on throughout the entire process. Depending on the number of projects a partner does, the different phases are supervised by SettleMint, the partner or a

combination of both. Obviously resulting in a higher partner revenue as he carries out more tasks. As a partner realizes more projects with Mint, the role of SettleMint in the process gradually diminishes and the partner's profit increases.

It doesn't matter whether you are an SME or a large company. And it doesn't matter if you act locally, regionally or globally, there's always room for a discount on Mint, depending on the number of sales and engineers you assign. And as the first deals roll in, we will refund you the training certification costs.

Interested in taking your Blockchain knowledge to a higher level and becoming a Value Added Reseller for Mint?

Contact us at
hello@settlemint.com



“With Mint, your IT team
can develop a Blockchain
application in 12 to 18 days.”

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