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The Ultimate Enterprise Blockchain Glossary

100+ Common Terms and Phrases

A

Address
A unique identifier that serves as a virtual location where cryptocurrencies can be sent.

AML (Anti-Money Laundering)
Legal controls that require financial institutions and other regulated entities to prevent, detect, and report money laundering activities.

Appchains
Application-specific blockchains tailored to support specific decentralized applications (DApps) or services, offering customized governance, scalability, and consensus mechanisms suited to the app's needs.

Application Layer
The top layer in blockchain architecture where applications access the data and functionalities of the blockchain.

Atomic Swap
A technology that enables the exchange of one cryptocurrency for another without the need for a trusted third party.

Asset Tokenization
The process of converting rights to an asset into a digital token on a blockchain. This approach enables fractional ownership, improves liquidity of traditionally illiquid assets like real estate, and simplifies buying, selling, and trading processes on digital platforms.

> **Did you know?**
> The Kaleido Asset Platform provides a complete stack for building asset tokenization solutions across public and private chains. Designed from the ground up to meet enterprise requirements, it's the most open, pluggable platform in the industry. **Request a demo** →

Avalanche
Avalanche is a decentralized, open-source blockchain platform that has high throughput, low latency, and scalability while maintaining security. It supports the deployment of custom blockchain networks and decentralized applications (DApps).

B

Block Height
The number of blocks in the chain between any given block and the genesis block.

Block Reward
The incentive given to a blockchain miner for successfully validating a new block and adding it to the blockchain.

Block
A file containing data related to transactions that are digitally signed and securely linked together, forming a blockchain.

Blockchain
A decentralized digital ledger that records transactions across multiple computers ensuring security and immutability.

Blockchain-as-a-Service (BaaS)
A cloud-based service model that enables users to build, host, and operate their own blockchain apps, smart contracts, and functions on a blockchain infrastructure provided and managed by an external service provider. BaaS offers a simplified way for businesses and developers to adopt blockchain technology without the need for extensive infrastructure setup or in-depth technical expertise.

> **Did you know**
> Kaleido offers an industry leading blockchain-as-a-service. Launch blockchain networks on the protocols of your choice in seconds and get to production quickly with a full stack of pre-built services and APIs, all backed by enterprise-grade infrastructure. **Try it free today** →

Blockchain Consortium
A collaborative network where multiple organizations come together to develop and govern a blockchain system collectively. It aims to leverage the strengths and capabilities of its diverse members to achieve specific industry goals, share costs, and foster innovation within a trusted ecosystem.

Blockchain Explorer
A tool that allows users to view information about blocks, transactions, and addresses on a blockchain.

Blockchain Governance

The system of rules and processes through which decisions about the blockchain network are made, including updates and protocol changes.

Blockchain Middleware

Software that acts as a bridge between blockchain applications and existing enterprise systems, facilitating communication, data exchange, and interoperability. It enables developers to create applications that can interact seamlessly with various blockchain networks without needing deep blockchain expertise.

Bridges

Technologies that enable the transfer of assets and information between different blockchain networks, facilitating interoperability and communication between otherwise isolated ecosystems.

C

CBDCs (Central Bank Digital Currencies)

CBDCs are digital forms of fiat money issued and regulated by a country's central bank. Unlike cryptocurrencies, which are decentralized and operate independently of any central authority, CBDCs are centralized and designed to represent a digital equivalent of a nation's physical currency.

> **Did you know**
> Kaleido offers the industry's most complete CBDC Sandbox. Accelerate CBDC development with quick setup, easy onboarding, and the widest range of protocol, privacy, and custody options anywhere. **Request a demo** →

Chaincode

Smart contracts in Hyperledger Fabric, used to encode the business logic of a contract.

Chainlink

A decentralized oracle network that provides real-world data to smart contracts on the blockchain. It allows blockchain-based applications to interact with external data sources, APIs, and payment systems, bridging the gap between blockchains and the real world.

Cold Storage

A way of holding cryptocurrency offline to enhance security.

Compliance

Adherence to laws, regulations, guidelines, and specifications relevant to a business.

Consensus Layer

The layer of a blockchain protocol where consensus on transactions occurs.

Consensus Mechanism

A foundational technology in blockchain that enables network participants to agree on the validity of transactions and the current state of the distributed ledger, without the need for a central authority.

Consensus Protocol

The rules and processes that determine how nodes agree on the validity of transactions.

Corda

A highly specialized blockchain platform developed by R3 for business applications, particularly in the financial sector and beyond, where privacy, regulatory compliance, and interoperability are of paramount importance.

Custody

The safekeeping of cryptocurrency or tokens on behalf of asset owners. Custodial services are provided by specialized entities or platforms that manage the security of the private keys needed to access and transact with these digital assets.

Cross-Chain Technology

Technology that enables the exchange of information and value between different blockchain networks.

Cryptocurrency

A digital or virtual currency that uses cryptography for security and operates independently of a central bank.

Cryptography

The practice and study of techniques for secure communication in the presence of third parties.

D

DAO (Decentralized Autonomous Organization)

A DAO is an organization that is run through rules encoded as smart contracts. They operate on a blockchain, allowing them to run autonomously without the need for a central governing authority. DAOs are typically managed by their members and use tokens to vote on important decisions.

DApp (Decentralized Application)

A software application that runs on a decentralized network, typically a blockchain, instead of being hosted on centralized servers.

Data Layer

The layer of a blockchain where data is stored and managed.

Decentralized ID (DID)

Decentralized ID (DID) is a type of identification that enables a person or entity to control their identity through blockchain technology without relying on any centralized authority.

DeFi (Decentralized Finance)

Financial services, including lending, borrowing, and trading, provided on public blockchains like Ethereum without traditional financial intermediaries.

Delegated Proof of Stake (DPoS)

A faster, more efficient version of PoS where stakeholders vote for delegates to validate transactions and create blocks.

Digital Asset

A digital asset is any text or media that is formatted into a binary source and includes a right to use it. In the context of blockchain, it refers more specifically to assets like cryptocurrencies, tokens, and other types of digital value that can be transferred, stored, or recorded on a blockchain.

> **Did you know**
> The Kaleido Asset Platform provides a complete stack for building digital asset and tokenization solutions across public and private chains. Designed from the ground up to meet enterprise requirements, it's the most open, pluggable platform in the industry. **Request a demo** →

Digital Identity

A digital representation of an individual's identity, secured on a blockchain.

Distributed Ledger Technology (DLT)

The technology underlying blockchain, enabling the distribution of digital records across a network without a central authority.

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E

ERC-20 (Ethereum Token Standard)
A technical standard used for smart contracts on the Ethereum blockchain for implementing fungible tokens, where every token is interchangeable.

ERC-721 (Non-Fungible Token Standard)
A standard for representing non-fungible tokens (NFTs) on the Ethereum blockchain. Each ERC-721 token is unique and can represent a different value or asset.

ERC-1155 (Multi-Token Standard)
A standard that allows a single contract to represent multiple token types, including fungible, non-fungible, and semi-fungible tokens.

ERC-1400 (Security Token Standard)
The ERC-1400 standard is a comprehensive framework for issuing and managing security tokens on the Ethereum blockchain. It incorporates features necessary for legal compliance and regulatory approval, such as transfer restrictions, investor qualification checks, and enhanced transparency.

Ethereum
A decentralized, open-source blockchain system that features smart contract functionality. It provides a platform for developers to build and deploy decentralized applications (DApps) and is home to a vast ecosystem of crypto assets, including its native cryptocurrency, Ether (ETH).

Event Streams
Event Streams refer to real-time, continuous flows of data generated by various sources or activities within a system. In the context of software and technology, event streams are used to capture, process, and analyze a sequence of events or actions as they occur, enabling immediate response or decision-making.

EVM (Ethereum Virtual Machine)
The runtime environment for smart contracts in Ethereum, allowing them to be executed on the network.

F

Fork
A change in protocol causing the division of a blockchain into two separate paths, either temporarily or permanently.

Full Node

A node in a blockchain network that fully enforces all the rules of the blockchain by downloading and maintaining a complete copy of the ledger.

G

Gas Fees

The fee paid to conduct a transaction or execute a contract on blockchain platforms like Ethereum, priced in small fractions of the cryptocurrency.

Gas Limit

The maximum amount of gas a user is willing to spend on a transaction or smart contract execution in the Ethereum network.

Gas

A unit that measures the amount of computational effort required to execute operations on the Ethereum network.

Genesis Block

The very first block in a blockchain.

Governance

The mechanisms, policies, and procedures that manage the operation and modifications of a blockchain system.

H

Hard Fork

A permanent divergence from the previous version of a blockchain; nodes running previous versions will not be accepted until they upgrade.

Hash Function

A function that converts an input (or 'message') into a fixed-size string of bytes. The output, typically a 'hash', is unique for unique inputs.

Hash Rate

The measure of computational power per second used when mining.

Hashing

The process of converting input of any length into a fixed-size string of text, using a mathematical function.

HD Wallets (Hierarchical Deterministic Wallets)

Blockchain wallets that generate a hierarchical tree-like structure of public and private keys from a single master seed. This feature allows users to create a virtually unlimited number of addresses from one seed, improving privacy and simplifying wallet backup and recovery.

Hot Wallet

A cryptocurrency wallet that is connected to the internet, making it more vulnerable to hacking.

Hyperledger

An umbrella project of open-source blockchains and related tools, hosted by the Linux Foundation. It aims to advance cross-industry blockchain technologies for business. Unlike single blockchain systems, Hyperledger encompasses a variety of independent projects including Hyperledger Fabric, Besu, FireFly, and more, each designed to provide unique features and capabilities for enterprise blockchain solutions.

Hyperledger Besu

An open-source Ethereum client designed for corporate use, supporting both public and private permissioned network use cases. Besu provides a platform for building enterprise-grade blockchain applications that require high performance and privacy features.

Hyperledger Fabric

An open-source, permissioned blockchain protocol that facilitates secure and scalable consensus and smart contracts execution. It is designed for the creation of blockchain applications that require high degrees of privacy, scalability, and flexibility.

Hyperledger FireFly

The industry's first open source web3 gateway—a complete stack for enterprises to build and scale blockchain-based applications. FireFly's next-gen platform simplifies development, making it easy to connect across multiple public and private chains while running many use cases simultaneously.

> **Did you know**
> Kaleido offers the easiest platform anywhere for building with Hyperledger Besu, Fabric, or FireFly.
> **Try it free today** →

I

ICO (Initial Coin Offering)
A fundraising method in which new projects sell their underlying crypto tokens in order to fund their operations and development.

Interledger Protocol
A protocol for connecting different blockchains and payment networks to facilitate the transfer of tokens and data.

Interoperability
The ability of different blockchain systems to communicate and interact with each other without intermediaries.

IPFS (InterPlanetary File System)
A decentralized, peer-to-peer file-sharing system that enables the storage and sharing of files in a distributed network, reducing reliance on centralized servers and improving resistance to censorship.

K

Key Management
Key management involves the procedures and mechanisms for generating, storing, protecting, and handling cryptographic keys that are used for securing digital transactions and access to blockchain assets.

KYC (Know Your Customer)
The process of a business verifying the identity of its clients to prevent fraud.

L

Layer 0
The underlying network infrastructure and protocols that enable blockchain interoperability.

Layer 1
The base level of blockchain architecture, including the blockchain protocol itself.

Layer 2

A secondary framework or protocol built on top of an existing blockchain to enhance its scalability and efficiency.

Ledger

A record-keeping system; in the context of blockchain, it refers to the digital ledger of transactions that is distributed across the entire network.

Light Node

A type of node in blockchain networks that does not store the full blockchain but instead relies on other nodes for information.

M

Mainnet

The primary network where transactions occur on a distributed ledger.

Master Node

A node in a blockchain network that performs special functions beyond just creating blocks or verifying transactions.

Merkle Tree

A structure that allows for efficient and secure verification of content in a large body of data.

Mining

The process by which transactions are verified and added to the public ledger, known as the blockchain.

MPC (Multi-Party Computation) Wallet

A type of cryptocurrency wallet that enhances security and privacy by splitting signing authority across multiple parties or devices, requiring a consensus among them to execute transactions instead of relying on a single private key for signing transactions.

N

NFT (Non-Fungible Token)
A type of cryptographic token on a blockchain that represents a unique asset or good.

> **Did you know**
> The Kaleido NFT Platform gives you everything you need to create NFT ecosystems that are tailored to your business and easy for your customers to use. **Request a demo** →

Node
Any computer that connects to the blockchain network.

O

Off-Chain
Transactions that occur outside of the blockchain network but can affect transactions or balances on the blockchain.

On-Chain Governance
A governance system where changes are made through proposals and voting directly on the blockchain.

Oracle
A service that sends real-world data to smart contracts on the blockchain.

P

Peer-to-Peer Network (P2P)
A decentralized network of computers each of which acts as a node for sharing files within the network.

Peer
An individual or node that shares resources within a network without central authority or hierarchy.

Permissioned Blockchain
A blockchain where access is restricted to certain users, as opposed to a public blockchain.

Permissionless Blockchain

A blockchain that anyone can join and participate in, such as Bitcoin or Ethereum.

Privacy Coin

Cryptocurrencies focused on providing secure and private transactions.

Private Key

A secret number that allows a user to access and control their digital assets.

Proof of Stake (PoS)

A consensus mechanism where validators are chosen to create a new block based on the amount of cryptocurrency they hold and are willing to "stake" as collateral.

Proof of Work (PoW)

A consensus mechanism requiring participants to perform computationally intensive tasks to validate transactions and create new blocks.

Public Key Infrastructure (PKI)

A set of roles, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates and manage public-key encryption.

Public Key

A publicly disclosed number that is derived from a private key and used to receive cryptocurrencies.

Q

Quorum

An enterprise-focused, distributed ledger and smart contract platform that evolved from Ethereum. It is designed for applications requiring high speed and high throughput processing of private transactions within a permissioned group of known participants. Quorum addresses specific challenges to blockchain adoption for the financial industry, including privacy and performance.

R

Real World Assets (RWAs)

Real World Assets refer to tangible or intangible assets in the physical world, such as real estate, commodities, intellectual property, and financial instruments, that have intrinsic value. In the context of blockchain and digital finance, RWAs can be tokenized, converting their ownership or value into digital tokens on a blockchain.

REST APIs (Representational State Transfer Application Programming Interfaces)

REST APIs are a set of rules and standards used to build scalable web services. They enable different software applications to communicate over the internet in a simple and standardized way.

S

Scalability

The ability of a blockchain network to handle a large number of transactions quickly.

Sharding

A method for distributing data across multiple servers to improve the scalability and speed of a blockchain network.

Sidechain

A separate blockchain that is attached to its parent blockchain using a two-way peg.

Smart Contracts

Self-executing contracts with terms directly written into code, automatically enforcing and executing agreements.

Soft Fork

A temporary divergence in a blockchain that is backward-compatible, not requiring nodes to upgrade.

Stablecoin

A type of cryptocurrency that is designed to maintain a stable market price by being pegged to fiat currencies.

Staking

Participating in a proof-of-stake (PoS) system by holding funds in a cryptocurrency wallet to support the operations of a blockchain network.

T

Token Standard

A set of rules and standards adopted by cryptocurrencies and tokens to ensure interoperability.

Tokenization

The process of converting rights to an asset into a digital token on a blockchain.

TPS (Transactions Per Second)

The number of transactions a blockchain network can process each second.

V

Validator

A participant in the blockchain network responsible for verifying transactions and blocks in proof-of-stake (PoS) and other consensus mechanisms.

W

Wallet Address

A unique identifier that represents a destination for a cryptocurrency payment.

Wallet

A digital tool that allows users to store, send, and receive digital currencies.

> **Did you know**
>
> Kaleido offers the full range of wallet technologies. Whatever custody solution you need for your digital asset or tokenization solution, we support it. **Learn more** →

Web3

Often referred to as the third generation of the internet, Web3 represents a decentralized online ecosystem built upon the foundational blockchain technology. Unlike its predecessor, Web2, which is dominated by centralized platforms and intermediaries, Web3 emphasizes user sovereignty, data privacy, and interoperability across various applications.

Z

Zero-Knowledge Proofs (ZKPs)

Zero-Knowledge Proofs are cryptographic methods that enable one party (the prover) to prove to another party (the verifier) the truth of a specific statement or condition, without revealing any information beyond the validity of the statement itself.

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