

Understanding the Different Types of Crypto Networks

Layer 1 Networks (Base Layer Blockchains)

Layer 1 networks are independent blockchains with their own infrastructure, native tokens, and consensus mechanisms. Examples include Bitcoin, Ethereum, Solana, Avalanche, Cardano, and BNB Chain. These blockchains handle their own transaction validation and provide the foundation for decentralized apps and digital money.

Layer 2 Networks (Scaling Solutions)

Built on top of Layer 1 blockchains, Layer 2s handle transactions off-chain to make them faster and cheaper. Examples include Polygon, Arbitrum, Optimism, zkSync, and StarkNet. They enhance scalability while relying on Layer 1 for security.

Sidechains

Sidechains are separate blockchains compatible with a Layer 1 network but have their own consensus rules. They provide scalability with some trade-offs in decentralization. Popular examples include Polygon POS Chain and xDai.

Private/Permissioned Blockchains

These are closed networks where only approved participants can validate transactions. Common in business settings, examples include Hyperledger Fabric and Quorum. Used for supply chain tracking, healthcare, and enterprise planning.

Interoperability Protocols

Networks like Polkadot, Cosmos, and Quant allow blockchains to communicate and transfer data. They break down blockchain silos and foster ecosystem collaboration.

Privacy Coins/Networks

Focused on private and anonymous transactions, examples include Monero and Zcash. They use cryptographic methods like ring signatures and zk-proofs to protect user data.

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DeFi-Centric Networks

Designed for decentralized finance, these networks support lending, borrowing, and trading. Examples: Fantom, Canto, and Kava. They often include DEXs, stablecoins, and staking protocols.

NFT & Gaming-Focused Blockchains

Optimized for fast and cheap NFT minting and gaming experiences. Examples include Immutable X, Flow, and WAX. Support metaverse economies and collectibles.

AI and Data Networks

These blockchains integrate AI and data sharing in a decentralized way. Examples: Fetch.ai, Ocean Protocol, and Giza. They enable smart automation, AI model deployment, and secure data marketplaces.