

LAYER 2 SOLUTIONS

Solutions	General Characteristics	Types	Examples	Specific Characteristics
Rollups	Security derived from L1 (through complete data maintenance on L1)  Provides good security and decentralization	<b>Zero-Knowledge Rollups</b>  - More trustworthy regarding economics attacks than ORs.  - Usage of validity proofs like SNARKs and STARKs contribute to swifter transaction processing.	Immutable X	High Scalability Gas Fee Reduction
			Loopring	High Scalability High Security
			Matter Labs zkSync	High Scalability High Security
			Polygon Hermez	High Scalability Gas Fee Reduction
			zkTube	High Scalability Gas Fee Reduction
			Aztec 2.0	High Scalability High Security
		<b>Optimistic Rollups</b>  - Slower to process on-chain transactions compared do ZK.  - Stronger native support than ZK, enabling a swifter launch of apps.	Arbitrum	High Scalability Gas Fee Reduction Fraud Proof Usage
			Optimism	High Scalability
			Metis	High Scalability Native Storage High Security
			Boba	Gas Fee Reduction High Security
			Fuel Network	High Scalability
			Cartesi	High Scalability
SideChains	Security not derived from L1  Less decentralized		Skale	High Scalability On-Chain Data Storage
			Polygon POS	High Scalability
			Gnosis Chain (xDai)	High Scalability
State Channels	Need for security check  High scalability (through high throughput)  Proper decentralization can be compromised(?)		Connext	Gas Fee Reduction High Security Good Interoperability
			Kchannels	High Scalability
			Perun	High Scalability Good Interoperability
			Raiden	High Scalability Good Interoperability
			Statechannels.org	High Scalability
Plasma	Need for security check  High scalability (through high throughput and low cost)  Proper decentralization can be compromised(?)		Polygon (Matic Network)	High Scalability High Security
			OMG Network	High Scalability Smart-Contract Capabilities' Expansion
			LeapDAO	High Scalability
Validium	Security derived from L2 (through validity proofs)  Proper decentralization can be compromised(?)		Starkware	Improved Scalability Validity Proofs Usage
			Matter Labs zkPorter	High Scalability High Security
			Loopring	High Scalability High Security