Notes on bridging types and design considerations

Bridging in blockchain technology is essential for enabling asset transfers between different networks or from traditional financial systems to blockchain-based ecosystems. There are two primary types of bridging mechanisms: decentralized bridging and notary bridging, each serving distinct purposes.

Decentralized Bridging
Decentralized bridging facilitates interchain transfers between different blockchain networks without relying on centralized intermediaries. This type of bridging leverages smart contracts and decentralized protocols to ensure that transactions are secure and trustless, providing a seamless experience across multiple networks. Chainlink's Cross-Chain Interoperability Protocol (CCIP) is an example of this approach, allowing decentralized approval of interchain transfers. However, its adoption is currently limited to a few major blockchain networks.

Notary Bridging

Notary bridging, on the other hand, is typically used for off-ramp and on-ramp transactions, bridging between traditional financial systems and blockchain networks. This approach involves a centralized notary or a group of notaries who verify and approve transactions before they are committed. The process often includes multiple approval APIs and rigorous validation checks to ensure security. This method is commonly employed by popular bridging platforms, where approvals can range between 43-50 steps before funds are exchanged, providing an added layer of safety.

In conclusion, while decentralized bridging offers a more secure and trustless mechanism for interchain transfers, notary bridging is crucial for secure and compliant interactions between traditional financial systems and blockchain networks. Both play vital roles in the broader landscape of blockchain interoperability.

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