What are the Types of Nodes in the Avail Network?

Introduction

While Avail diverges from conventional blockchain frameworks to concentrate on modular solutions tailored for data availability, it continues to utilize a diverse array of node types. These nodes differ in their functions, storage needs, and levels of engagement within the network.

Node Types Comparison

Note: Infrastructure providers can host all types of Avail nodes.

Node Type Storage Requirement Network Role Special Features Use Case Typically Hosted By Light Clients Low Interaction Minimal Storage Quick Queries, Low-resource Environments End users in low-resource environments Full Nodes Moderate Core Network Access Transaction Verification, Data Retrieval Regular network participants, those involved in verification Validator Nodes Moderate Core Block Production Network Security, Governance Trusted entities, elected participants, staked node providers RPC Nodes Moderate Gateway API Exposure Development, Remote Access Developers, entities requiring remote network access

Overview of Node Types

Light Clients

Light clients allow users to interact with the blockchain without downloading the entire transaction history. They rely on a trusted set of nodes for the data needed to engage with the network.

Full Nodes

Full nodes maintain the blockchain's current state but do not store its entire history. Optimized for quick access to current data, they are ideal for tasks like transaction verification.

Validator Nodes

Validator nodes are specialized full nodes that participate in block production and network governance. They are staked to ensure network security and integrity.

RPC Nodes

RPC nodes expose an API for remote interactions, serving as a gateway for developers and external clients to engage with the Avail network.

Next Steps

Now that you have a comprehensive understanding of the various node types within the Avail network, it's recommended to take your first step by setting up a Light Client. Before you begin, make sure to review theSystem Requirements guide . Once you're ready, you can proceed to theLight Client Deployment guide to get started.

Light Clients provide an accessible entry point to the Avail network, enabling quick interactions without storing the full blockchain. Ideal for newcomers, they play an integral role in maintaining a robust data availability layer.

Operate a Node Hosted Deployments