Running node flags

Here's a detailed explanation of each flag used when running a Cardano node:

Flag	Purpose	Usage	Example
--topology FILEPATH	Specifies the file path to the topology file. This file defines the network topology of node, including the nodes it will connect to and their addresses.	The topology file is essential for determining how your node connects to other nodes in the network.	--topology ~/cardano-node/config/topology.json file definition: Node topology
--database-path FILEPATH	Sets the file path where the database files will be stored. This is where the node will keep its blockchain data.	The node uses this path to read and write data about the blockchain's state.	--database-path ~/cardano-node/db
--socket-path FILEPATH	Specifies the file path for the node socket. This is used for inter-process communication between the node and other Cardano utilities, such as **`cardano-cli`, `ogmios`, `kupo`, `cardano-wallet ...`**	This path allows other tools or services to connect to your node for querying or submitting transactions.	-socket-path ~/cardano-node/node.socket
--byron-delegation-certificate FILEPATH	Defines the path to a Byron delegation certificate. This certificate is used to delegate stake in the Byron era.	If you're running a node that needs to handle Byron-era delegation, you'll specify this file.	--byron-delegation-certificate ~/cardano-node/config/byron-delegation.cert
--byron-signing-key FILEPATH	Specifies the path to the Byron-era signing key file. This key is used for signing transactions and certificates in the Byron era.	Essential for nodes involved in Byron-era transactions or staking.	--byron-signing-key ~/cardano-node/config/byron-signing.key
--shelley-kes-key FILEPATH	Provides the path to the Shelley era KES (Key Evolving Signature) key file. This key is used in the Shelley era for signing block headers.	Required for nodes participating in the Shelley era, especially if running a stake pool.	--shelley-kes-key ~/cardano-node/config/shelley-kes.key
--shelley-vrf-key FILEPATH	Sets the path to the Shelley era VRF (Verifiable Random Function) key file. This key is used for generating random numbers necessary for block production in the Shelley era.	Important for nodes participating in the Shelley era.	--shelley-vrf-key ~/cardano-node/config/shelley-vrf.key
--shelley-operational-certificate FILEPATH	Defines the path to the Shelley operational certificate file. This certificate is required for running a Shelley-era node or stake pool.	This certificate authenticates your node's ability to produce blocks.	--shelley-operational-certificate ~/cardano-node/config/shelley-operational.cert
--start-as-non-producing-node	Starts the node in a mode where it does not produce blocks. This is useful for nodes that are only used for relaying information and not for producing new blocks.	Use this flag if you want your node to act as a relay or a passive participant in the network.	--start-as-non-producing-node
--host-addr IPV4-ADDRESS	Sets the IP address for the node to listen on for incoming connections. This should be an IPv4 address.	Defines which network interface the node will use	--host-addr 192.168.1.2
--host-ipv6-addr IPV6-ADDRESS	Sets the IP address for the node to listen on for incoming connections using IPv6.	If your network uses IPv6, you'll need to specify this address.	--host-ipv6-addr 2001:db8::1
--port PORT	Specifies the port number on which the node will listen for incoming connections.		--port 3001
--config NODE-CONFIGURATION	Provides the path to the node configuration file. This file contains various settings and parameters that the node will use, including network parameters and other configurations.	This is a crucial file for setting up your node's behavior and network parameters.	--config ~/cardano-node/config/config.json file definition: Node configurations
--validate-db	Flag to revalidate all on-disk database files. This ensures that the blockchain data is consistent and correct.	Useful for debugging or troubleshooting issues with the blockchain data.	--validate-db