

# Technical discussion

The technical discussion is divided into several major areas:

- [Concepts](#)
- : reviewing a few crucial concepts from Computer Science
- [Why blockchain?](#)
- : offering a mental model for the value of decentralized shared global state
- [Why Monad: decentralization + performance](#)
- : summarizing some of the existing bottlenecks in maintaining shared global state in Ethereum, and how Monad addresses them
- [Consensus](#)
- : a summary of the novel aspects of Monad's mempool and consensus layers
- [Execution](#)
- : a summary of how transactions are executed in Monad, as well as how state is stored
- [Transaction lifecycle](#)
- : a walkthrough of the lifecycle of a transaction
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Monad enables pipelining and optimization in four major areas to enable exceptional Ethereum Virtual Machine performance and materially advance the decentralization/scalability tradeoff. If you'd like to focus on those areas, please see the relevant pages below:

- [MonadBFT](#)
- : pipelined HotStuff consensus with additional research improvements
- [Deferred Execution](#)
- : consensus-execution staging
- [Parallel Execution](#)
- [MonadDb](#)
- : high-performance state backend for merkle trie storage
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[Previous Monad for developers](#) [Next Concepts](#) Last updated 5 months ago

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