# Article information:

Performance Modeling of Hyperledger Fabric (Permissioned Blockchain Network) | IEEE Conference Publication | IEEE Xplore
<https://ieeexplore.ieee.org/abstract/document/8548070>

# Article summary:

1. The article presents a performance model of Hyperledger Fabric v1.0+ using Stochastic Reward Nets (SRN) to compute throughput, utilization, and mean queue length at various peers within the blockchain network.

2. The model is validated through an experimental setup in a lab environment using Hyperledger Caliper, revealing insights such as the impact of the number of peers on the endorsement process time and strategies to mitigate performance bottlenecks.

3. The research contributes to understanding critical scenarios in the Fabric network, such as transaction processing pipelines and multiple endorsers per organization, providing valuable insights for system developers and practitioners.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article titled "Performance Modeling of Hyperledger Fabric (Permissioned Blockchain Network)" provides a detailed analysis of the performance model of Hyperledger Fabric v1.0+ using Stochastic Reward Nets (SRN). The article discusses the architecture of Hyperledger Fabric, transaction flow, performance metrics, and presents an SRN model for a single-channel Fabric network.

One potential bias in the article could be the focus on the positive aspects of Hyperledger Fabric without discussing any potential drawbacks or limitations. While the article mentions that HLF is currently deployed in more than 400 proof-of-concept and production distributed ledger systems across different industries, it does not address any challenges or criticisms that may exist with using this technology.

Additionally, the article may have a promotional tone towards Hyperledger Fabric as it highlights its benefits and features without providing a balanced view. It would be beneficial to include a discussion on potential risks associated with using permissioned blockchain networks like HLF, such as security vulnerabilities, scalability issues, or regulatory concerns.

Furthermore, the article lacks evidence for some of its claims, such as stating that time to complete the endorsement process is significantly affected by the number of peers and policies such as AND (). Providing data or case studies to support these claims would strengthen the credibility of the analysis.

The article also does not explore counterarguments or alternative perspectives on using Hyperledger Fabric. Including a discussion on competing technologies or different approaches to permissioned blockchain networks could provide a more comprehensive analysis.

Overall, while the article provides valuable insights into modeling the performance of Hyperledger Fabric, it could benefit from addressing potential biases, providing more evidence for its claims, exploring counterarguments, and presenting a balanced view of the technology's strengths and limitations.

# Topics for further research:

* Limitations of Hyperledger Fabric in blockchain technology
* Security vulnerabilities in permissioned blockchain networks
* Scalability issues in Hyperledger Fabric
* Regulatory concerns with using Hyperledger Fabric
* Alternatives to Hyperledger Fabric for permissioned blockchain networks
* Criticisms of Hyperledger Fabric in the blockchain community

# Report location:

<https://www.fullpicture.app/item/6793c8eeb56e1e8f6c6cc6aeb1348f60>