PowerChain

M Kaustubh Padakannaya, Mahesh M, Manish SB, Mantha Vinay

Under the guidance of Prof. Syed Akram

Department of Computer Science, B M S College of Engineering, Bangalore

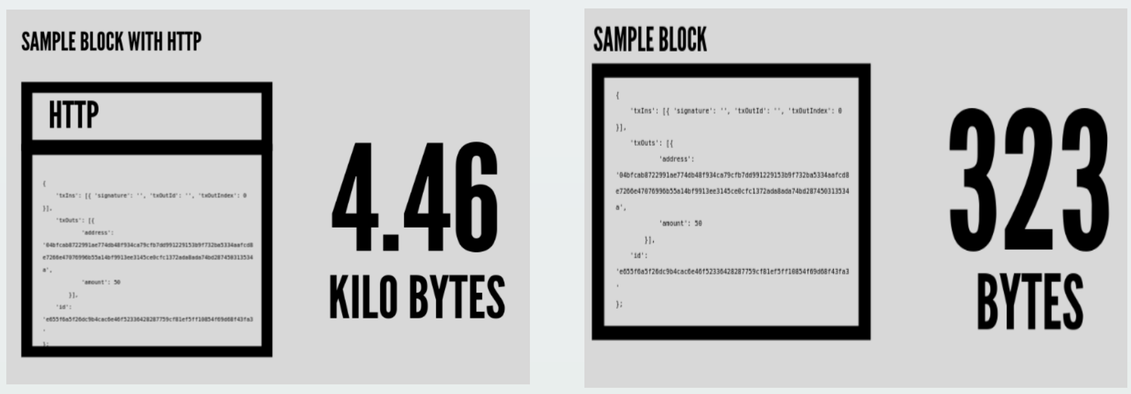
OBJECTIVE

- Build an accessible tool that can be assessed by any individual who wants to construct a network.
- Our goals are powered by research of problems concerning optimization of current implementation
- Building astandard in an otherwise heterogenous environment
- We want to achieve all this by adopting and adapting principles we learnt throughout the course of engineering

MOTIVATION

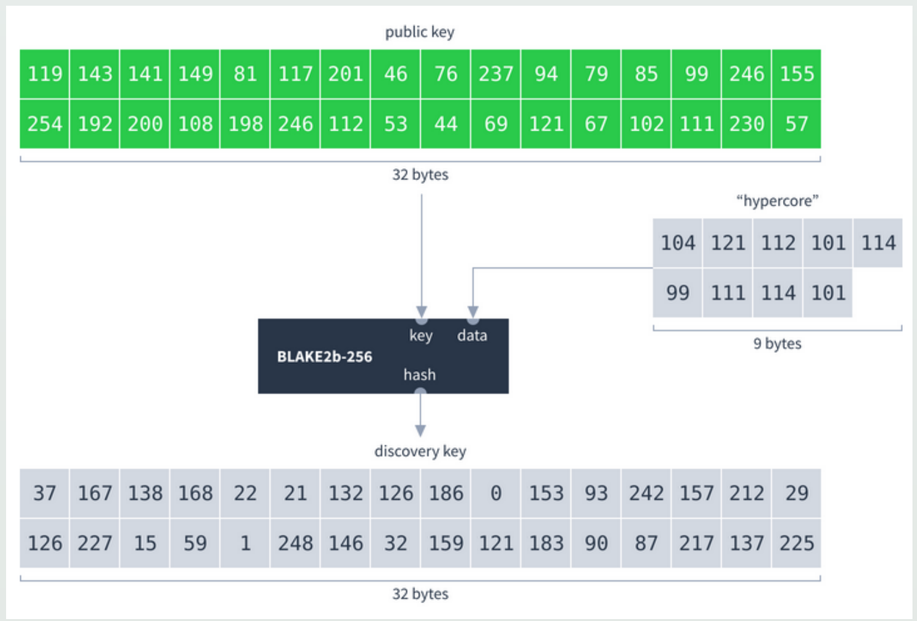
- The concept of blockchain is now an emerging communication and networking archetype. Hopping on to this abstraction would help us understand the future of computing technology and help drive newer solutions to older problems.
- Though distributed computing is a known computing paradigm, blockchain is still in its infancy, having a huge void in development and need for improvement. Lack of any baseline standards in this domain allowed us with the opportunity to find this problem and come to pose a probable solution.
- Though the technology is decorative in its visuals, the currently rushed implementation has a lot of issues with patchwork like mentality used for alternatives such as wallets. This motivated us to spend time and understand the issue with the existing covenant of crypto based transactions to help smoothen the transaction process and make a more streamlined solution.

CUSTOM PACKET DESIGN

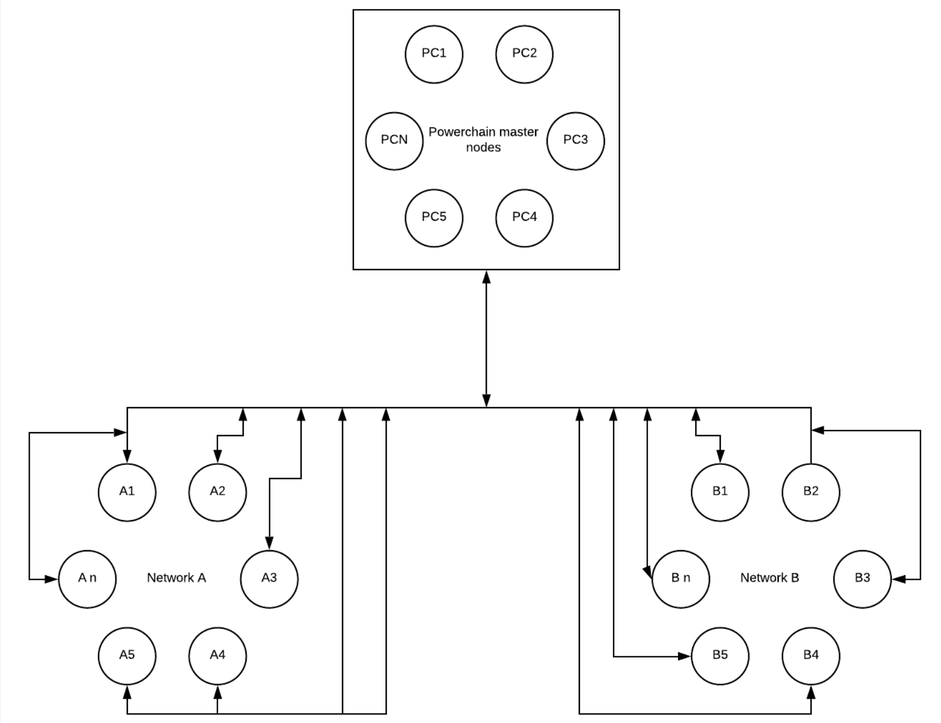


- A typical communication packet that holds trivial information such as transaction information is the only application data relevant to the functioning of the network.
- Considering a standard HTTP server such as NGINX , the addition of headers to the packet adds significant overhead to the transmitted message (almost 4KB extra)
- While HTTP functions such as GET and POST are critical for core web based applications, the need to have more blockchain specific parameters that add value to the process is much needed.

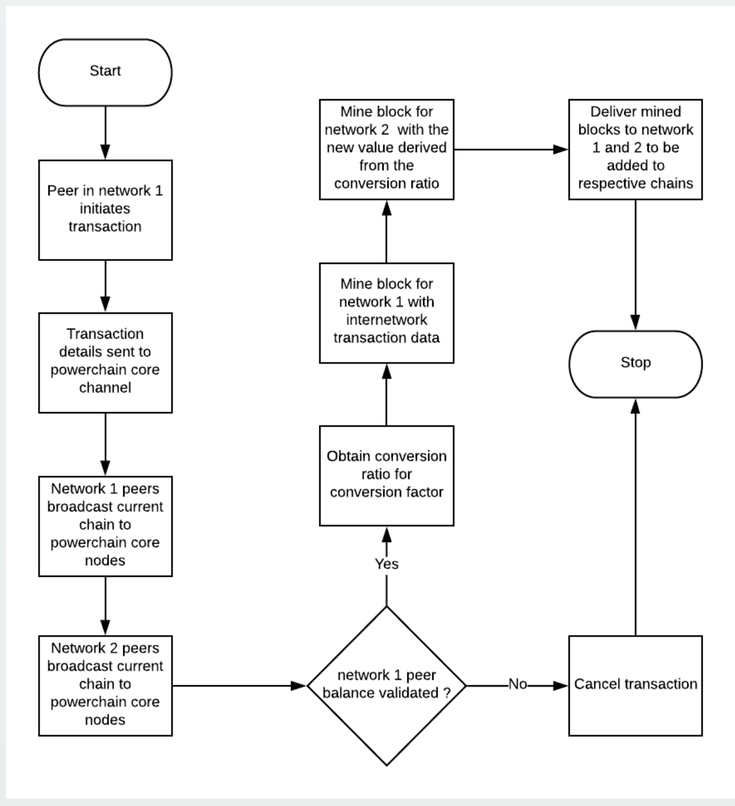
UTP BASED PEER DISCOVERY

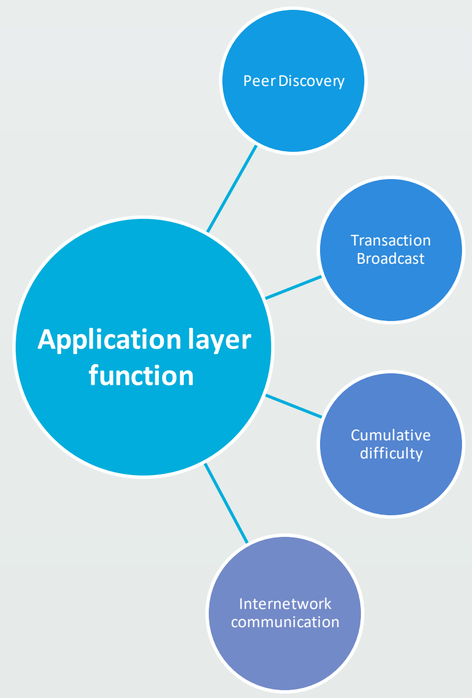


MULTI ECOSYSTEM ARCHITECTURE



PROCESS FLOW





CONCLUSION

- ➢ User-friendly
- ➢ Reliable
- ➢ Light Weight
- ➢ Customizable
- ➢ Scalable
- ➢ Built for the P2P environment
- ➢ Solves the problem of blockchain based network proliferation

- POs Addressed : PO1, PO2, PO3, PO4, PO5, PO9, PO10, PO12

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