3 Ways Enterprises Are Addressing Blockchain Privacy Concerns

Blockchain has been touted as the great connector to integrate businesses under consortium networks. It's ability to verify data using smart contracts and provide transparency across network participants through immutable shared data has people talking about a technical revolution. However, this benefit has been a double-edged sword because the enterprise world is skeptical about sharing sensitive data on a ledger where the information cannot be deleted. The good news is, this year has seen numerous announcements of single and multi-party blockchain pilots by the Fortune 500 such as…Starbucks andMetLife . Data privacy issues haven't stopped them and the enterprise blockchain world has taken these steps to shift their thinking.

1. Store references to data on the blockchain¶

The simplest way to circumvent this data privacy issue is to not put the data on the chain. A popular approach is to share anonymous IDs on the blockchain and use that to get data from another system. For example,MediLedger is a supply chain pilot in the heavily regulated pharmaceutical industry that uses a blockchain to trace a drug's exchange of hands and then uses another private peer-to-peer application to transfer details about the medication. What is passed around on the chain is just an anonymous identifier to the medication. This keeps transactions light, allows enterprises to regulate data access, and uses proven methods to secure sensitive data. MediLedger actually takes this a step further and anonymizes the transaction details with zero knowledge proofs — which I'll cover later.

2. Use blockchains to verify instead of share¶

Blockchain's real power is in its ability to verify data. Instead of putting actual information on the chain, a solution could combine unique elements of data and share a hash of it on the blockchain. Hashing is a cryptographic method that generates a random, unique value from a fed input. In this scenario, the resulting hash itself doesn't reveal any information, but it can verify an on-hand document by checking if it generates the same hash when fed into the function. The data inputs could also be selected in a way that no critical information is sampled to create the hash so that compliance regulations can be withheld. Businesses have reliable methods to exchange data, but the verification is long and expensive. By using blockchain as a verifier and not the store of the data, we can ease the pain point and maintain a higher level of privacy than open sharing.

3. Anonymize transactions with zero knowledge proofs¶

Building off the two previous trends, blockchain pilots have taken an extra step in securing data and replaced hashed transaction details with zero knowledge proofs (ZKP).ZKPs allow for verification of a transaction without exposing transaction details . Now two businesses can communicate on a public network and be completely anonymous. This is because what is placed on the chain is a proof that is cryptographically verified by the receiver, not the data that goes into the transaction. This shift in data validation methods addresses data privacy concerns and supports industry consortiums.

Blockchain is just one piece of the puzzle¶

Finally, with all the hype on blockchain's potential in the last years, we have to remember that this is just another tool in the technology box when solving a problem. Enterprises have gotten smarter in finding ways to use blockchain to solve unique problems that are more expensive or less reliable with other technologies. What we have seen is that distributed ledgers can't do everything, but when paired with multiple other technologies that help fill gaps, the solution as a whole is optimized. A better perspective is to not think of future solutions as blockchain applications, but rather applications that leverage the unique advantages of blockchain.

About West Monroe Partners¶

West Monroe is a national business and technology consulting firm that partners with dynamic organizations to reimagine, build, and operate their businesses at peak performance. Our team of more than 1,400 professionals across nine offices is comprised of an uncommon blend of business consultants and deep technologists. I am one of those consultants and I am one of the leaders of our blockchain center of excellence. I'll be presenting on Sunday morning (8/4) about one of our blockchain projects that looks toincentivize electric vehicle owners to charge with cleaner energy. Check us out at ourwebsite and read more about ourblockchain perspectives on our blog!

Danny Pan is a consultant with West Monroe Partner's Seattle Technology Practice. He focuses on providing value in adopting blockchain, distributed technologies, and robust SDLC practices. Contact Danny atdpan@wmp.com