

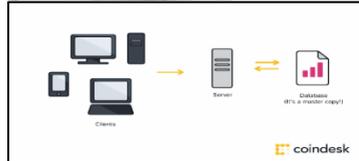
Nick's Corner



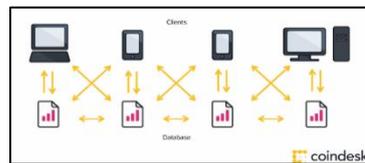
What is the Difference Between a Blockchain and a Database?

As stated in our guide "[What is Blockchain Technology?](#)", the difference between a traditional database and a blockchain begins with architecture, or how the technologies are orchestrated. A database running on the World Wide Web is most often using a client-server network architecture. A user (client) with permissions associated with their account can change entries that are stored on a centralized server. By changing the 'master copy', whenever a user accesses a database using their computer, they will get the updated version of the database entry.

Control of the database remains with administrators, allowing for access and



permissions to be maintained by a central authority.



This is not at all the same as with a blockchain. *For a blockchain database, each participant maintains, calculates and updates new entries into the database.* All nodes work together to ensure they are all coming to the same conclusions, providing in-built security

for the network. The consequences of this difference are that blockchains are well-suited as a system of record for certain functions, while a centralized database is entirely appropriate for other functions.

Decentralized Control. Blockchains allow different parties that do not trust each other to share information without requiring a central administrator. Transactions are processed by a network of users acting as a consensus mechanism so that everyone is creating the same shared system of record simultaneously.

The value of decentralized control is that it eliminates the risks of centralized control. With a centralized database, anybody with sufficient access to that system can destroy or corrupt the data within. This makes users dependent on the administrators. People's money is not stolen by banks that record the money they hold in private databases, for example. And, there is a logical reason why you would want centralized control. But, that also means those with control, such as a bank, need to spend billions of dollars keeping these centrally held databases from being altered by hackers or anyone else who might wish to profit from another's loss.

Performance. While blockchains can be used for systems of record and are ideal as transaction platforms, they are considered slow as databases when compared to what is possible for digital transaction technology that we see today. While there will certainly be improvements to this performance, the nature of blockchain technology requires that some speed be sacrificed.

The way distributed networks are employed in blockchain technology means they do not share and compound processing power, they each independently service the network, then compare the results of their work with the rest of the network until there is a consensus that something happened. Centralized databases, on the other hand, have been around for decades, and have seen their performance increase in lock-step with a formula that has come to define innovation in the digital era: Moore's Law.

Confidentiality. A permissioned blockchain, like a centralized database, can be write-controlled and read-controlled. That means the network or the protocol can be set up so only permissioned participants can write into the database or read the database. But, if confidentiality is the only goal, and trust is not an issue, blockchain databases pose no advantage over a centralized database. Hiding information on a blockchain requires lots of cryptography and a related computational burden for the nodes in the network. There is no way to do this that is more effective than simply hiding the data completely in a private database that does not even require network connectivity.

Authored by Nolan Bauerle; images by Maria Kuznetsov

Client Services

Good Day,

Thank you to all for your input and attendance at our annual LISP/Product Provider Forum, which was held on the 12th July 2017.

The minutes of the forum will be circulated shortly, however I will summarise some important points discussed:

- ✓ Calastone is live
- ✓ Transfer functionality can be utilised immediately, no enhancements required
- ✓ ManCo's to upload Reg. 28 file onto FinSwitch
- ✓ FinSwitch email notifications **must not** be ignored
- ✓ Future value dates will be accommodated in the free format TR file
- ✓ Manual linking of funds will be removed
- ✓ Fund accounts not transacted on in 6 months will be made inactive, security custodians will have rights to reactivate these accounts

A big thank you to Silica, for hosting the forum for us!

Best Wishes

Tasneem Gydien

Manager: Client Relations

Application Desk

New Release

We are happy to announce that our second FinSwitch Release is scheduled for the 5th August.

Important

We have changed the ID (DWT) status field from "FINAL" to "ORIGINAL" thus aligning the upload file to the rest of our file types. The change has however necessitated an update to the webservices *.wsdl file to accept these parameters. Please ensure that you have the updated *.wsdl file deployed in this coming release. Contact Client Services should you need help.

New Features

We are introducing the new Asset Allocation file. ManCo's now have the facility to upload this file onto FinSwitch. The AA output file is in our standard FinSwitch download format.

To overcome the difficulty of reporting DWT by clients outside the Collective Investment setup, FinSwitch has introduced a Free Format ID file. Though the file is derived from the current DWT format, less validation with flexibility is introduced.

Enhancements

Some significant enhancements related to uploading of transactions have also been introduced. They are:

- Allow valid lines to be authorised when a Money Market cut-off is missed
- Configure default settings for the upload of valid lines for both frontend & Web Services
- Deactivate fund accounts last traded on for 6months (Bulked Investors)
- Free Format TR file allows future value date which will be of use for hedge funds

Contact Client Services for the full list of enhancements and bug fixes in this release.

Best Wishes

Ismail Allie

Manager: Application & Development

B-BBEE Certificate

You can download our certificate by clicking [here](#).