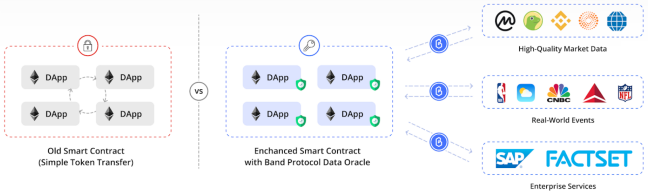
BAND PROTOCOL

Search

The BandChain Oracle

BandChain Oracle solution acts as a **middle layer** operating between the smart contracts platforms or decentralized applications and the various data providers. The oracles' task is to 1) handle data requests coming from the dApps, 2) query the data from the corresponding providers.

application.



Bandchain Oracle differentiates itself from other oracle solutions in four main ways:

1. Decentralization
2. Flexibility
3. Scalability
4. Cost

Decentralization

Bandchain Oracle is decentralized through the introduction of maximum redundancy **on two separate layers** in the infrastructure design: BandChain

First, BandChain is operated by a globally distributed pool of validators, whose performance and actions can be easily monitored and verified by anyone.

When a data request is made, it is these validators that will be responsible for fetching the results.

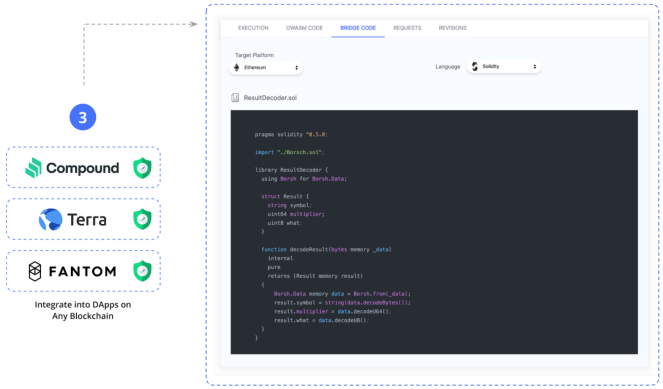
The results reported by the validators are also taken from multiple data sources, which acts as our second layer of redundancy. Further, BandChain's delegated proof of stake design further help ensure that these validators have monetary incentives to

as well as their reputation.

Finally, **the entire data request flow itself are also publically available to be viewed**, verified, and audited by anyone.

Flexibility

Our data source scripts and oracle scripts allow **maximum customization and flexibility** for user to query and compute their desired data feed.



Data sources are the most fundamental

specifies the primary source from

which BandChain's validators will retrieve data. Here users can freely specify where the datasources come from.

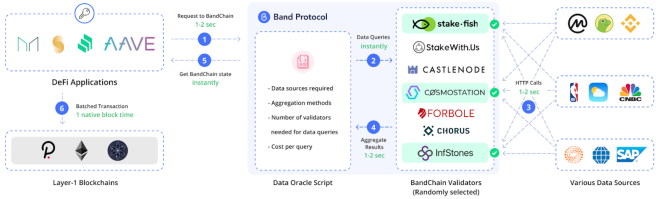
An Oracle script is then the pieces of code that defines the logic of the data request. In particular, the script specifies two things:

- the set of data sources that the validators will query data from
- the method in which to aggregate the result from those data sources into the final result

These oracle scripts themselves can be programmed in multiple programming languages, and act very much similar to smart contracts.

Unlike general-purpose blockchains, **BandChain is specifically designed for oracle data request and computation**. This is clearly reflected in the the benefits it provides.

For one, an average block time of only 3 seconds, compared to Ethereum's 10-15 and Bitcoin's 10 minutes means that data request transactions are both received and resolved very quickly.



Not only that, we are also able to **offload all the heavy oracle computations from the requester's chain and onto BandChain**, which have been specifically optimized for these sorts of computations.

All this boils down to the fact that an average data request to BandChain's oracle can be expected to resolve in less than 6 seconds.

This allows BandChain Oracle to continuously upgrade throughput capacity with the same base-level infrastructure

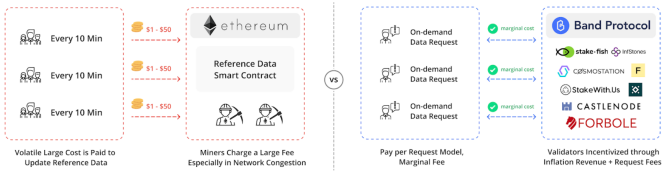
Having our own chain also means that the oracle core logic and operations does not need to duplicated itself onto a new chain or App for each integration, making integration with DApps scalable and streamlined.

Cost

Finally, there's the issue of cost. Band's oracle allows anyone looking to request data to do so only when they

on a per-request basis. This is

significantly more economical than having to say, update the price of an entire set of assets when in fact you might currently only need the latest price of one.



Found an Issue?

Help us improve this page by suggesting edits on GitHub.

PREVIOUS
The Need for Oracles

NEXT
Oracle Binary Encoding (OBI)

BAND PROTOCOL

bandprotocol.com

This website is maintained by Band Protocol. The contents and opinions of this website are those of Band Protocol.