

# DKVS

A DePIN network built from idle phones



# What is DKVS

## Define

- DKVS is a distributed Key Value storage system.
- It is core module of TVN network designed for Web3 application development.

## Goal

- Become a distributed memory for Web3 applications.

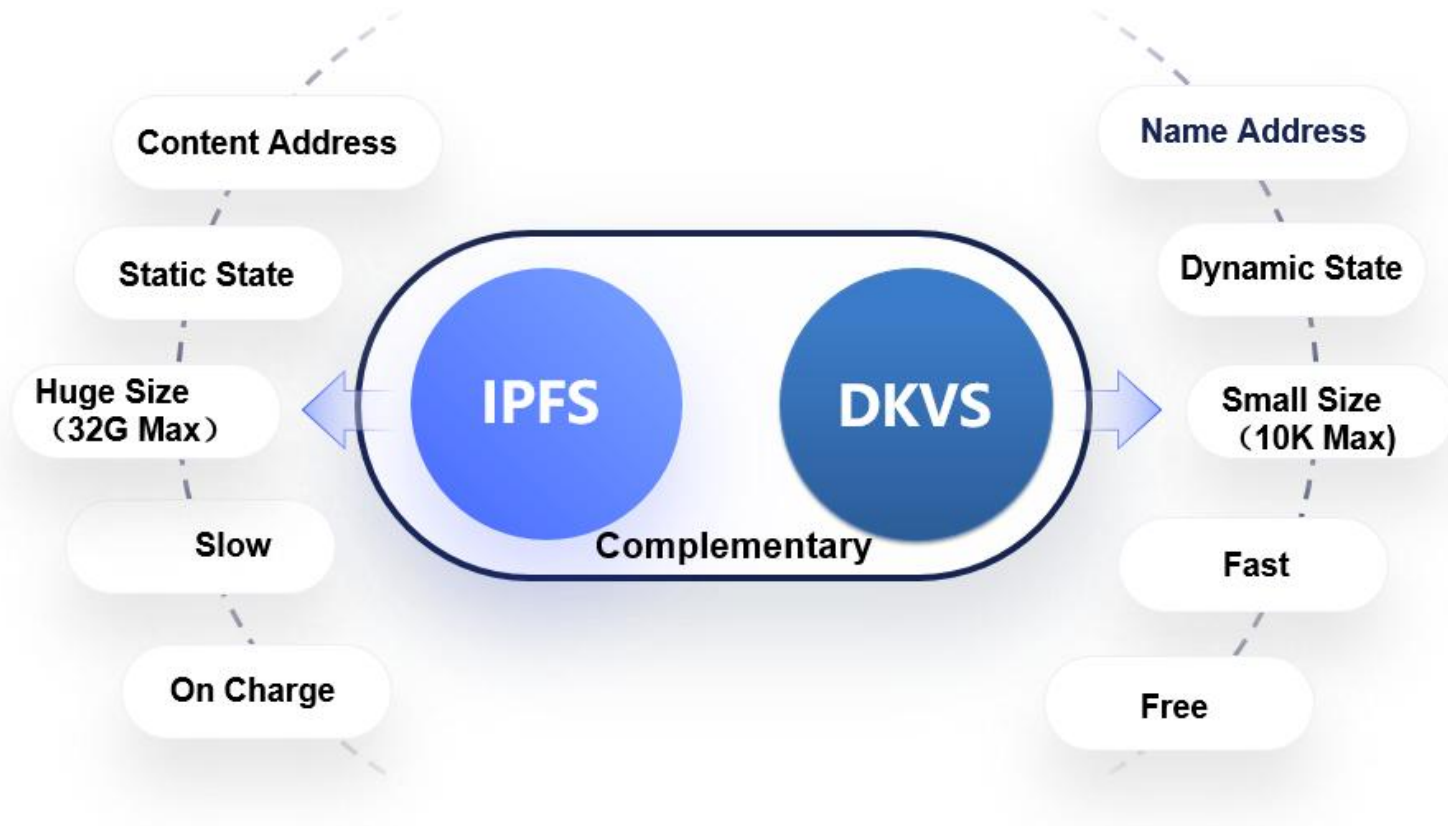
## Feature

Distinguished from  
ordinary distributed  
storage systems

- The Key-Value of DKVS is verified with signature, which means that each pair of KV has an owner. Only the owner can write and others can only read.
- Each pair of KV in DKVS has a limited storage size, which cannot exceed 10k bytes at most.
- The KV of DKVS is loaded into memory.



# DKVS and IPFS



- DKVS is the perfect partner for IPFS, DKVS and IPFS are just complementary.
- The main difference is that DKVS is name addressed, which is fundamentally different from IPFS.



# The Core Function of DKVS network



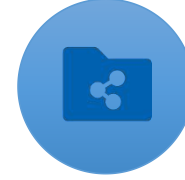
## Accounts Based on Asymmetric Keys

- All the network resources interact with each other by account, and accounts are the most fundamental function of the entire network.
- The account is a public-private key pair generated by cryptographic algorithms.



## Distributed Memory System DKVS

- KV is signed and exclusively owned by the account.
- Reading and writing data is first from network, ensuring that the read and written data is up-to-date. Through this module, the entire network becomes an unified memory for all applications, where data can be accessed through defined names.



## Distributed File System IPFS

- The IPFS module is a standard IPFS node that connects to the entire IPFS network and provides distributed storage function.
- All the IPFS files are encrypted by account's secret key.

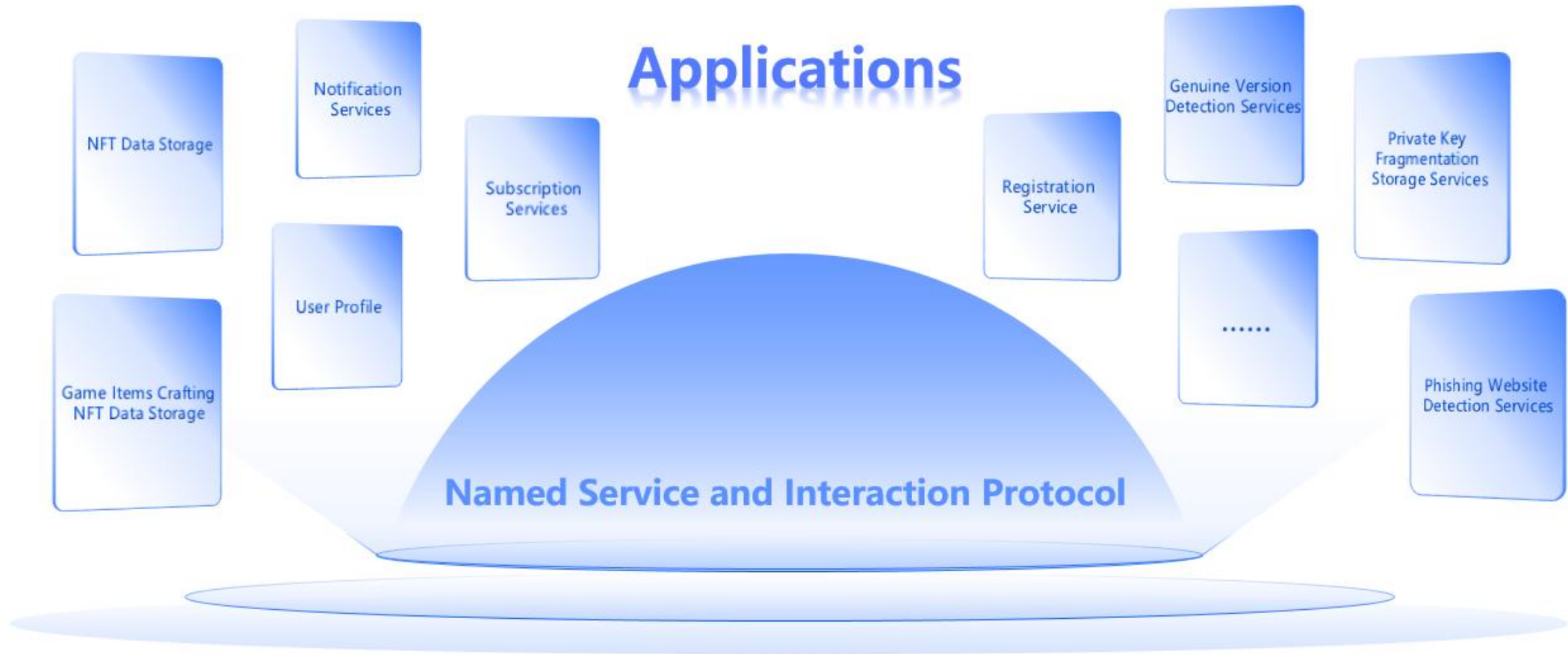


## Communication Protocol

- The communication protocol works on an account-based system.
- Each account has a mailbox which can receive online and offline messages.
- Through named public channels, each nodes can associate with each other to complete complex tasks.



# Application Scenarios



# 2023

**Together for Progress,  
Cooperation for Win !**