

Discussion about Cactus Future design

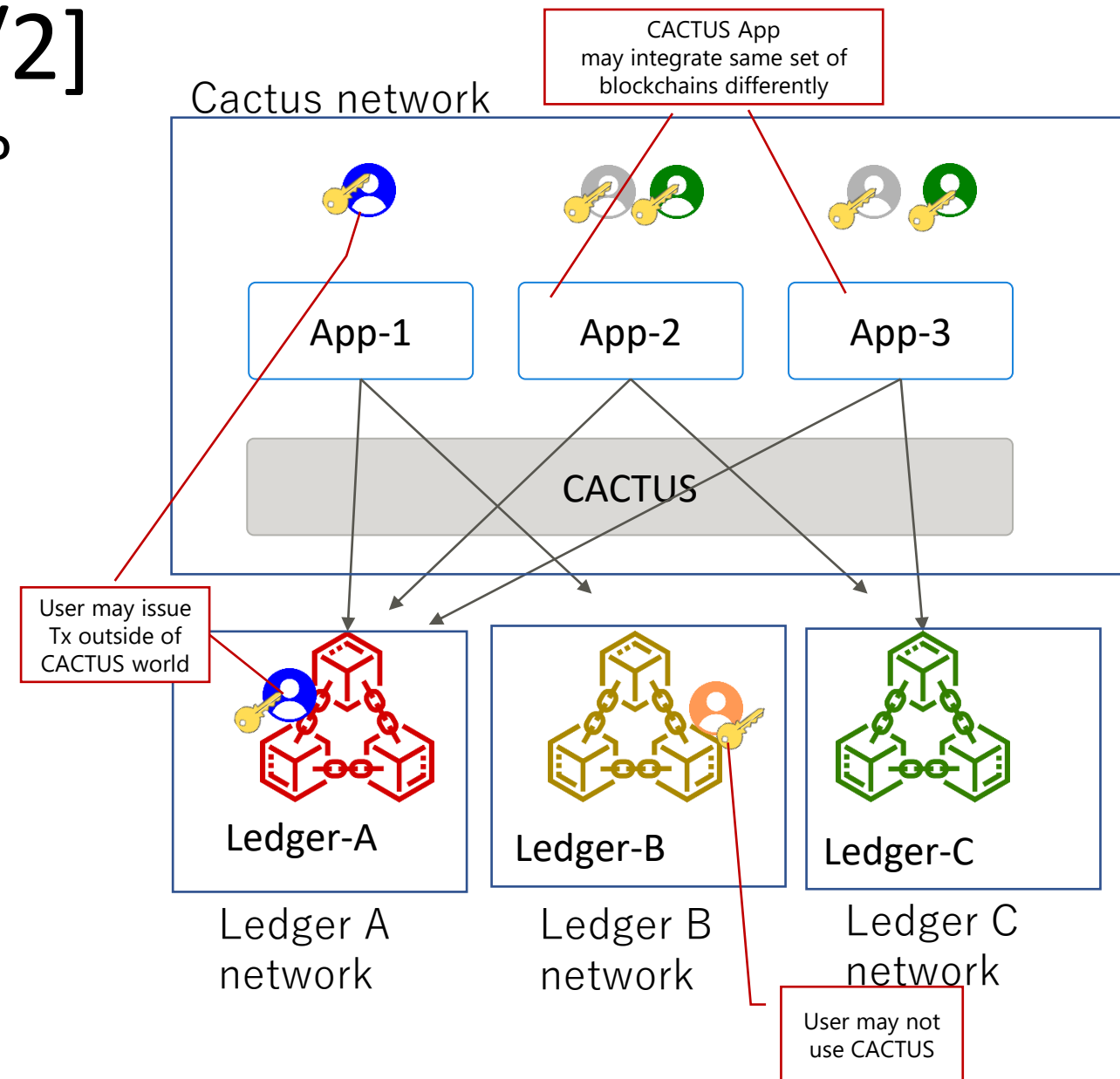
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Plan towards v1 release

- v0.4 at the end of March 2021
 - Ready to ask feedbacks from developers
 - Not intended production use
 - Some design choice are remained
- 2nd release (2021 summer)
 - Ready to ask evaluation of features committed for V1 release
 - Guarantee to success on build
- 3rd release = v1 (2021 winter)
 - Ready to ask approval by TSC

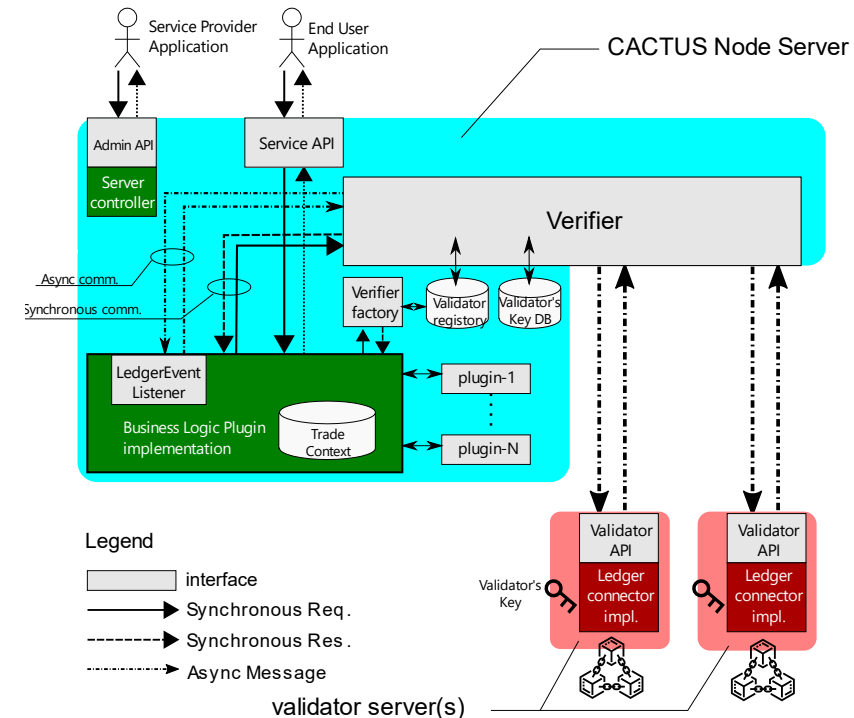
Cactus future design [1/2]

- What is interoperability on DLTs?
 - Enables end-users to operate various DLT without deep knowledge
 - End-users keep holding authorization right to issuing transactions
 - Automate triggering programmed action for executing transaction which is agreed in the contract
 - No administrator privilege on DLT operations
 - End-user may submit Tx not through CACTUS



Cactus future design [2/2]

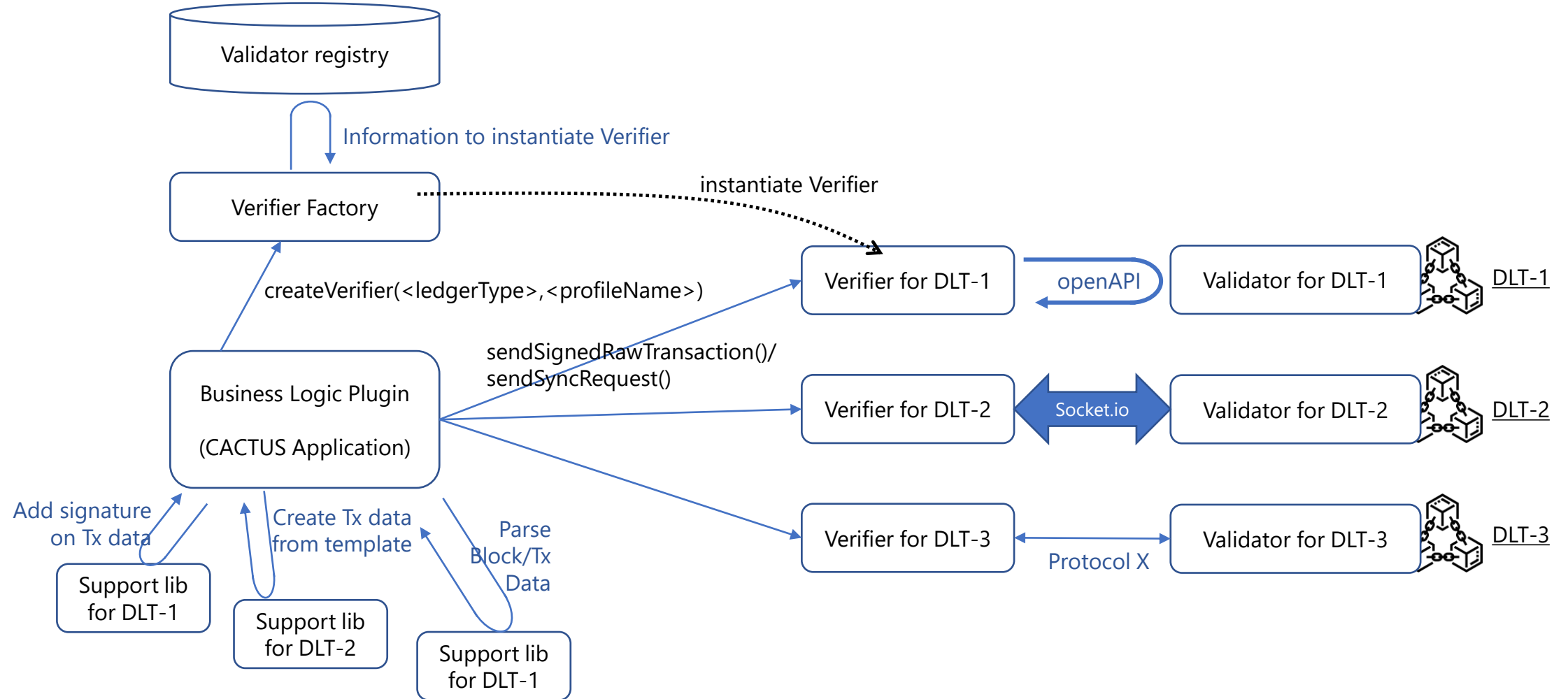
- **Cactus Node Server** executes abstract operations independent with connected ledgers
 - Required features:
 - Admin API, Service Controller, Service API
 - Verifier, Verifier factory, Validator Registry, Validator's Key DB
 - Features that are not includes:
 - Specific applications of Business Logics (Cactus provides only examples app, not core functionality)
 - Specific features depend on each ledgers (These are provided by Validators)
- **Validator** executes ledger-specific operations dependent on connected ledgers
 - Required features:
 - Validator API (abstract API connecting on Verifier)
 - Monitoring feature of blocks on connected ledgers
 - Requesting feature to connected ledgers



Each components in system architecture are described on the following:

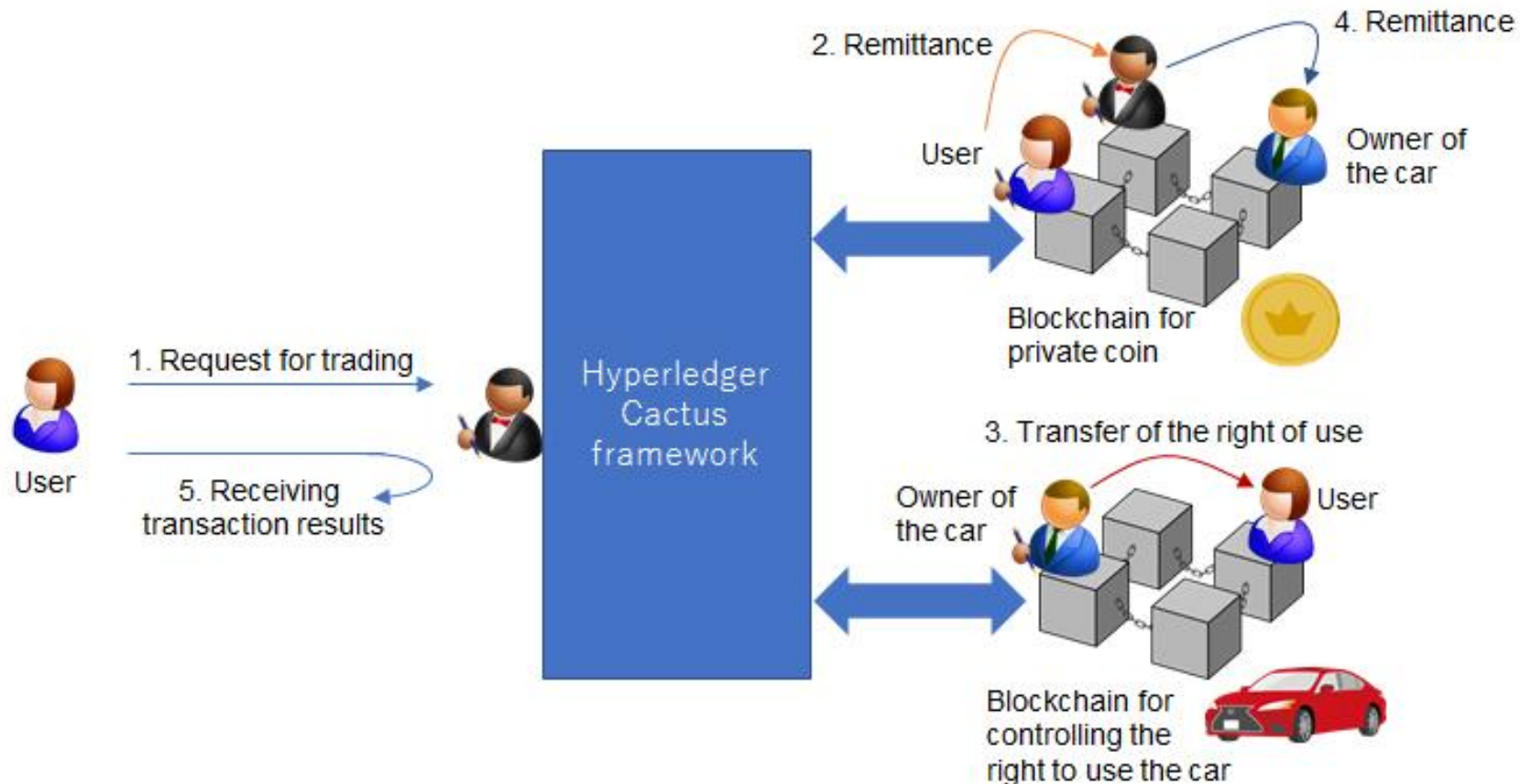
<https://github.com/hyperledger/cactus/blob/main/whitepaper/whitepaper.md#521-definition-of-key-components-in-system-architecture>

Proposed way to absorb difference between DLTs



Business Logic Plugin example 1: car-trade

- Interworking pattern 1: Cactus requests to connected ledgers according to business logic applications



Business Logic Plugin example 2: electricity-trade

- Interworking pattern 2: Transactions on connected ledgers triggers Cactus events according to business logic applications

