

CLAIMS

What is claimed is:

1. A computer-implemented method comprising:
 - maintaining, by a network server, data identifying one or more states recorded in a blockchain network as triggering states of one or more client service methods to be executed by one or more client devices off the blockchain network participating in a workflow;
 - receiving, by the network server from a first client device, a request for executing a transaction on a blockchain network;
 - instructing, by the network server, the blockchain network to execute the transaction;
 - monitoring, by the network server, a state on the blockchain network after execution of the transaction;
 - identifying, by the network server, the state to be a triggering state of a client service method of a second client device participating in the workflow, wherein the client service method is executable by the second client device off the blockchain network; and
 - sending, by the network server to the second client device, a notification that the triggering state is reached.
2. The computer-implemented method of claim 1, further comprising receiving, by the network server from the second client device, a subscription of the triggering state, wherein upon an occurrence of the triggering state on the blockchain network, the network server sends a notification of the triggering state to the second client device.
3. The computer-implemented method of claim 1 or 2, wherein monitoring, by the network server, a state on the blockchain network after execution of the transaction comprises retrieving log data stored on the blockchain network after execution of the transaction.
4. The computer-implemented method of claim 3, further comprising storing the log data on the network server.

5. The computer-implemented method of claim 3, wherein the log data are not stored in the first client device nor the second client device.
6. The computer-implemented method of any preceding claim, wherein the request for executing the transaction on the blockchain network is in response to a first client service method of the first client device that has been executed by the first client device off the blockchain network.
7. The computer-implemented method of any preceding claim, wherein instructing, by the network server, the blockchain network to execute the transaction comprises calling a smart contract deployed on the blockchain network to execute a state transition method on the blockchain network, wherein the smart contract was generated by the network server.
8. The computer-implemented method of any preceding claim, further comprising:
 - receiving, by the network server from the second client device, a notification that a second state is reached after the client service method has been executed by the second client device off the blockchain network; and
 - instructing, by the network server, the blockchain network to update the state of the blockchain network to the second state.
9. The computer-implemented method of claim 8, wherein instructing, by the network server, the blockchain network to update the state of the blockchain network to the second state comprises calling a smart contract deployed on the blockchain network to execute a state transition method on the blockchain network, wherein the smart contract was generated by the network server.
10. The computer-implemented method of any preceding claim, wherein the blockchain network is a first blockchain network and the network server is further communicatively linked with a second blockchain network, the method further comprising:
 - monitoring, by the network server, a second current state on the second blockchain network;

identifying, by the network server, the second current state to be a triggering state of a third client service method of a third client device participating in the workflow, wherein the third client service method is executable by the third client device off the second blockchain network; and

sending, by the network server to the third client device, a notification that the triggering state of the third client device method is reached.

11. An apparatus for implementing a blockchain-based workflow, the apparatus comprising a plurality of modules for performing the computer-implemented method of any one of claims 1 to 10.

12. A system for implementing a blockchain-based workflow, comprising:

one or more processors; and

one or more computer-readable memories coupled to the one or more processors and having instructions stored thereon that are executable by the one or more processors to perform the computer-implemented method of any one of claims 1 to 10.