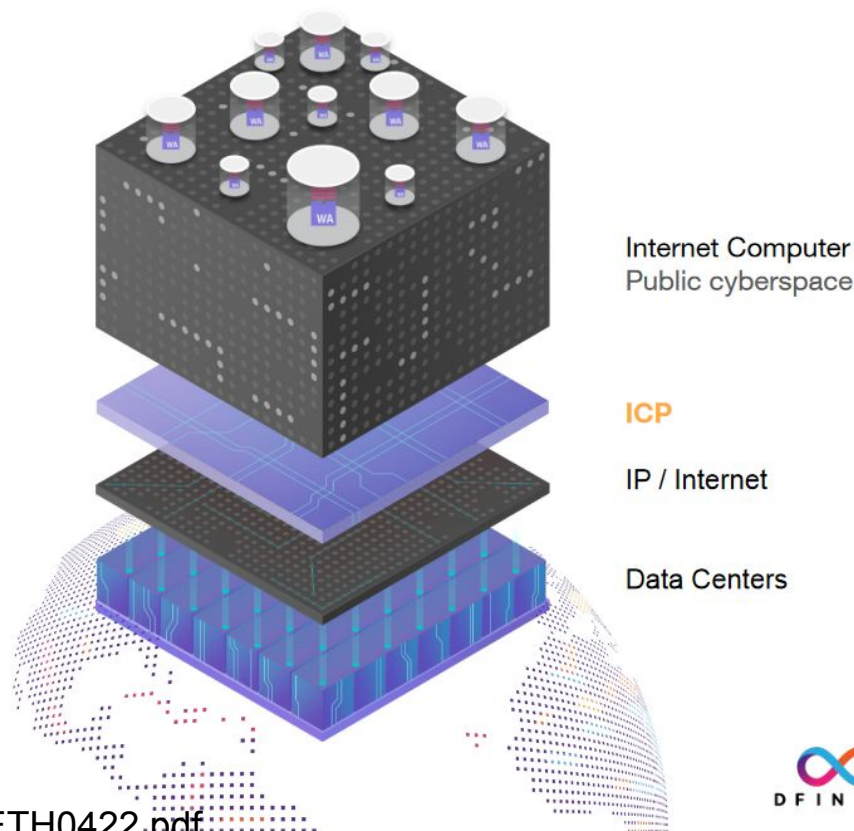


ICP - Polimi Blockchain Course presentation

Internet Computer Protocol (ICP)

Coordination of nodes in
independent data centers,
jointly performing any
computation for **anyone**

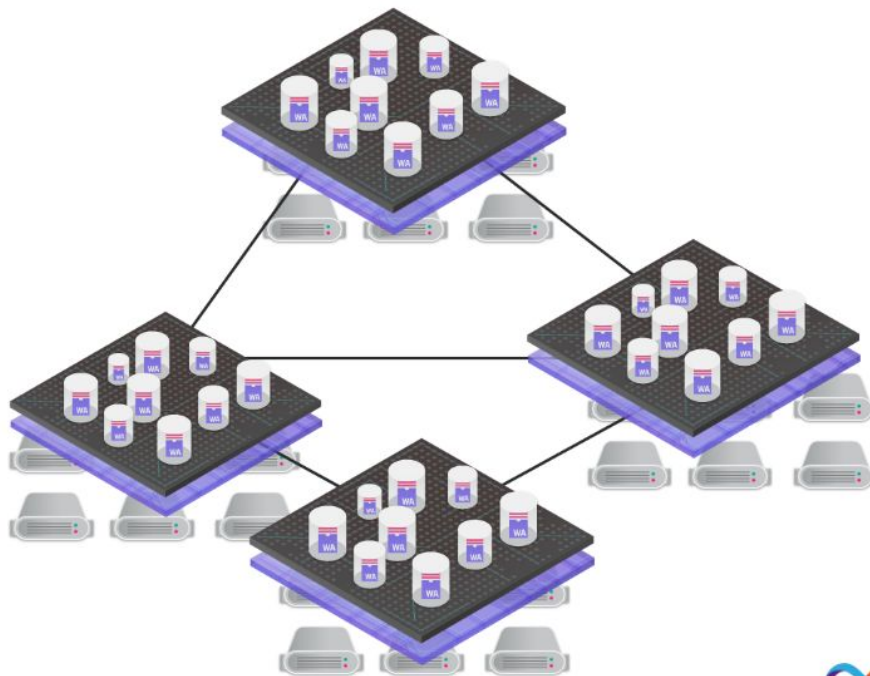
- Create Internet Computer blockchains
- Guarantee safety and liveness of smart contract execution despite Byzantine participants



Scalability: Nodes and Subnets

Nodes are partitioned into subnets

Canister smart contracts are assigned to different subnets



State Machine Replication

State:

- canisters and their queues

Inputs:

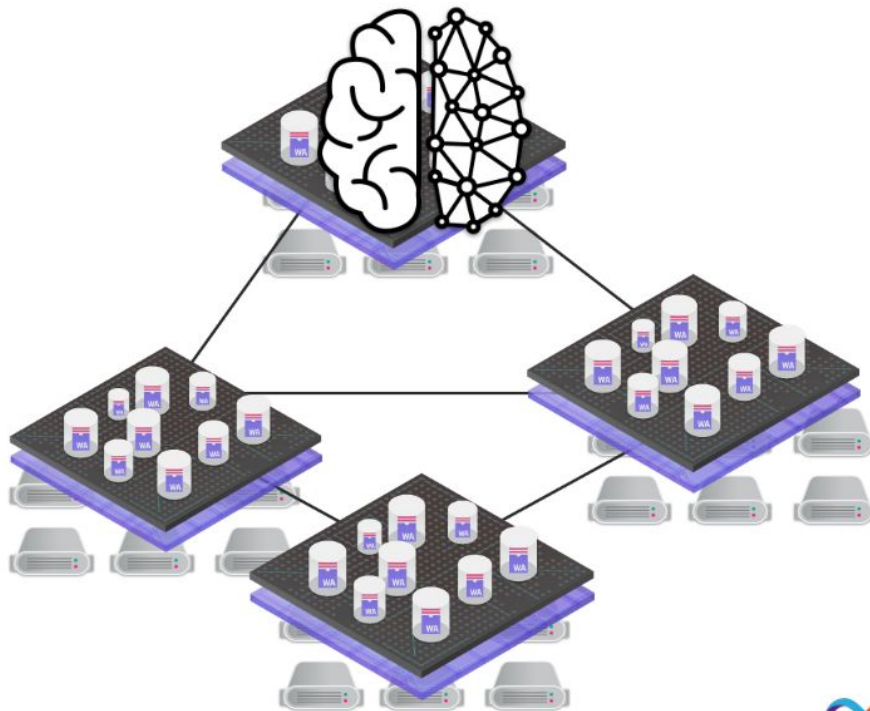
- new canisters to be installed,
- messages from users and other canisters

Outputs:

- responses to users and other canisters

Transition function:

- message routing and scheduling
- canister code



Sample Project:

Demo of various ICP features, including:

- Multiple canisters
- Decentralized Backend
- Direct Interaction with Canisters and via RPC
- Canisters hot swap
- Canisters inter communication
- Canisters data persistence on-chain