Introduction to Ethereum and DAPPS

Jan-Erik Sandberg
COO

www.jan-erik.com

What Is Ethereum?

Open source

Application development

Crypto currency called Ether

Fast transactions

Funded transactions

Proof of stake

Why Ethereum?

Community support

Evolved

Contract development

Easy to get started

Broad commercial adoption

Ether

Currency symbol = ETH

Highly volatile, be careful!

Ether Denominations

1 ETH = 1.000.000.000.000.000.000 WEI

1 ETH = 1.000.000 Szabo

1 ETH = 1000 Finney

Kether, Mether, Gether, Tether..

Ethereum Classic

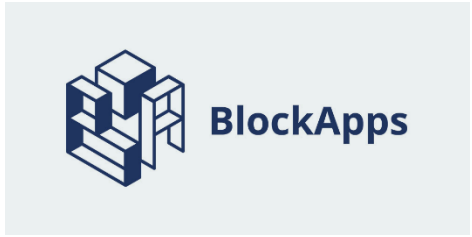
Ethereum Classic = ETC

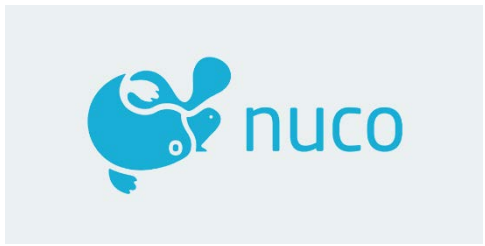
The DAO Hack

Hard Fork

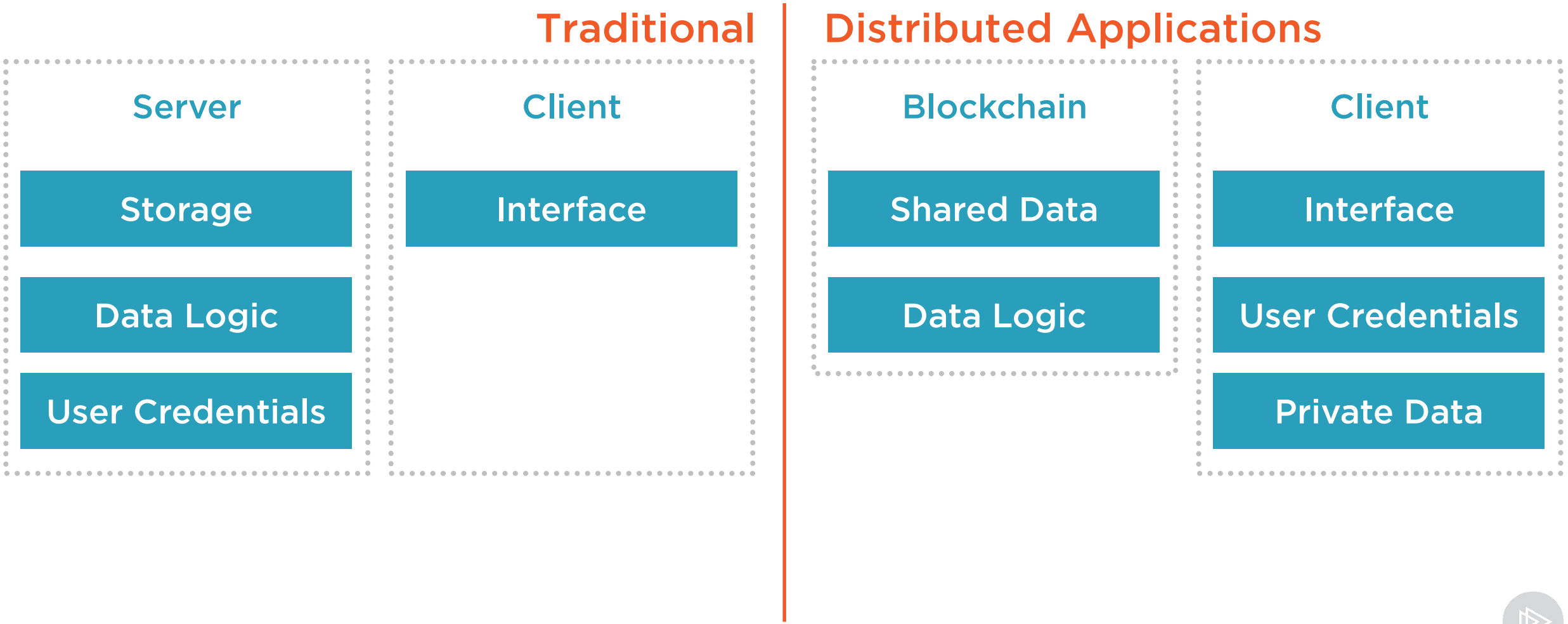
Crypto-anarchist

The Enterprise Ethereum Alliance





Distributed Applications (DAPPs)



Smart Contracts in Ethereum

Data logic layer

Read other contracts

Decide

Send Ether

Execute other contracts

Payment Model - Gas

Protecting
vs. attacking

Gas

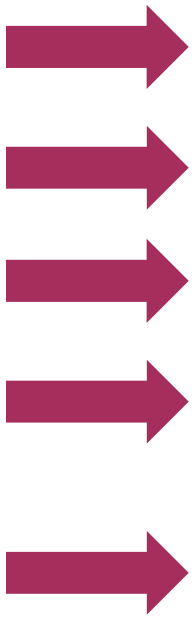
Computation
Memory
Bandwidth
Storage

Rollback

Transactions

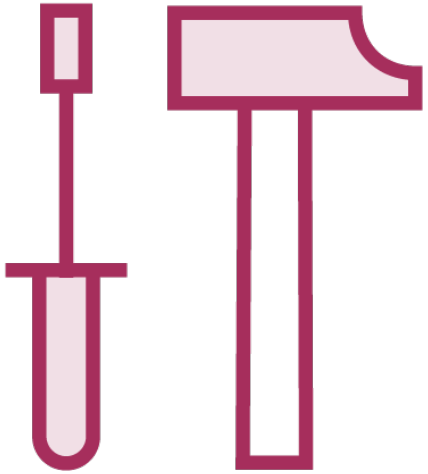
Recipient	Signature	Value
Gasprice	Startgas	Message

The Effect of Startgas and Gasprice

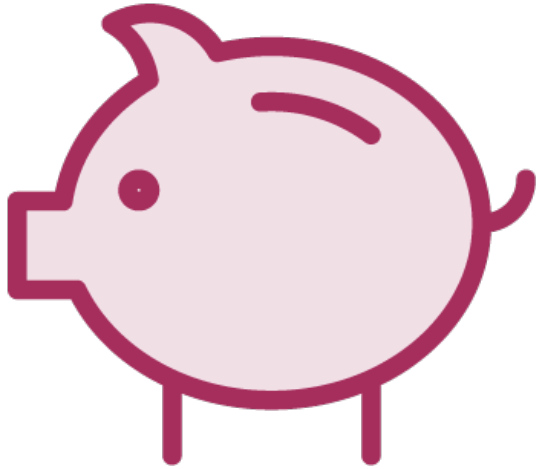


	Startgas	Gasprice
Too low	Not sent to miners	No work done by miners
Low	Out-of-gas error	Mined slower
Medium	Ideal	Ideal
High	Delay in getting mined	Mined faster
Too high	Exceed block gas limit	Not sent to miners if sender is out of funds

Proof of Work vs. Proof of Stake



Proof of Work



Proof of Stake

Ethereum on Microsoft Azure

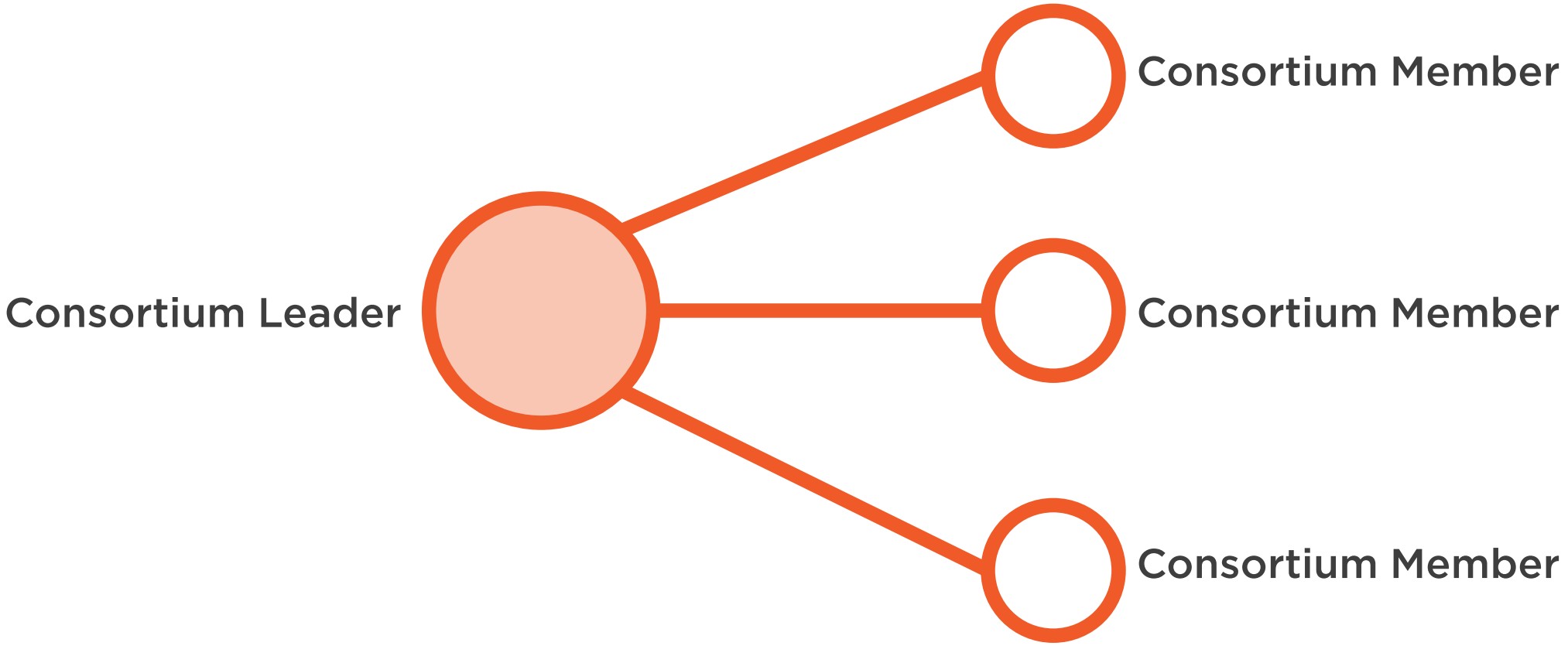
Application hosting

Storage

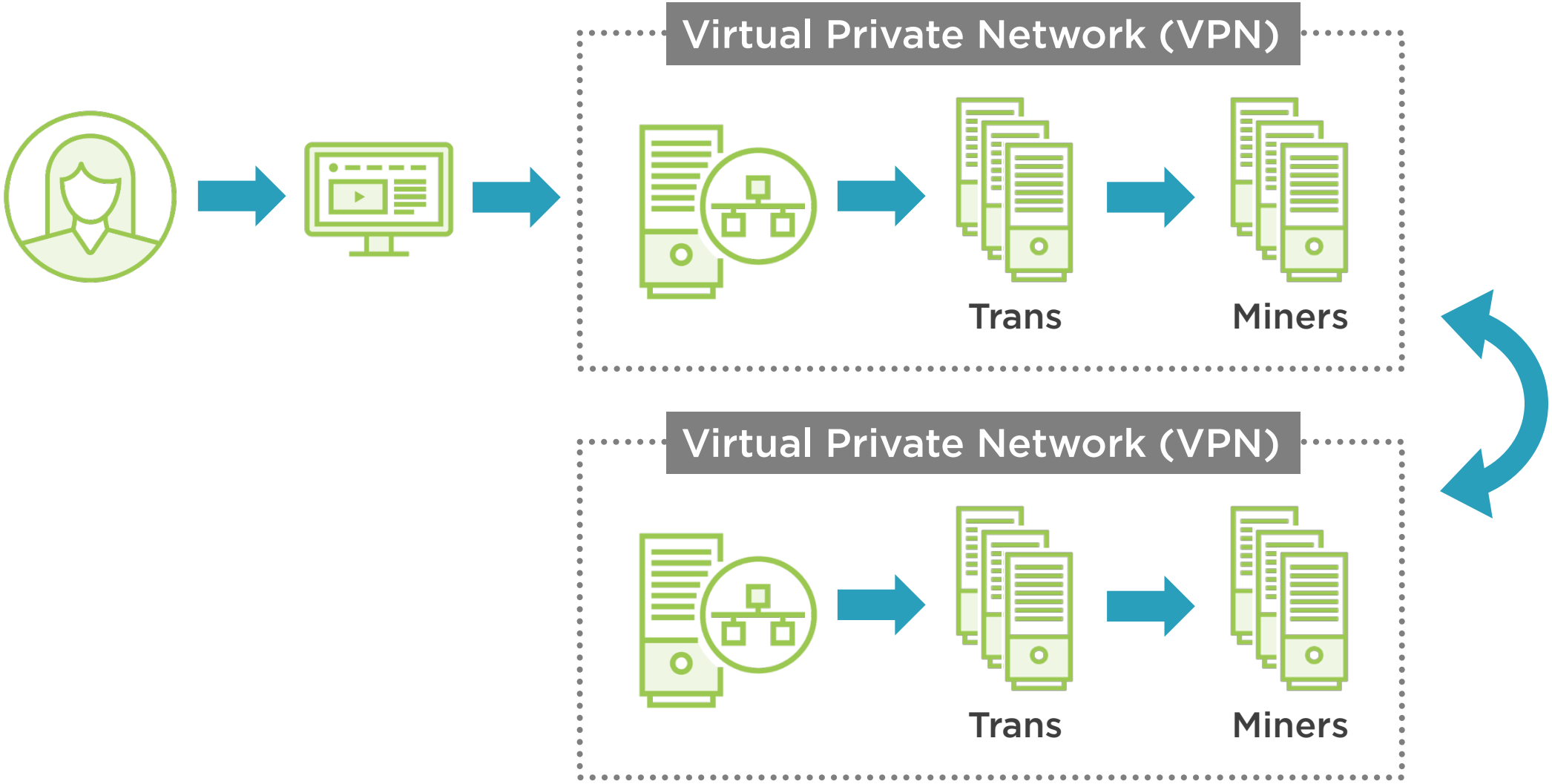
Identity management

Security

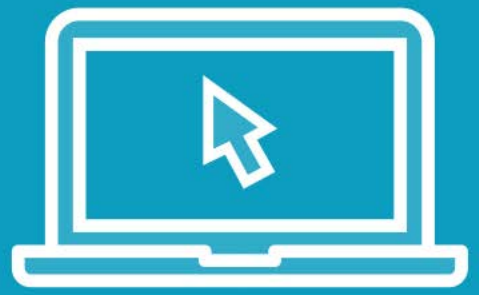
Ethereum Consortium



Infrastructure



Demo



Blockchain consortium on Azure

Genesis block

Transfer ether between accounts

Summary

What and Why?

Distributed Applications

Ethereum on Microsoft Azure