

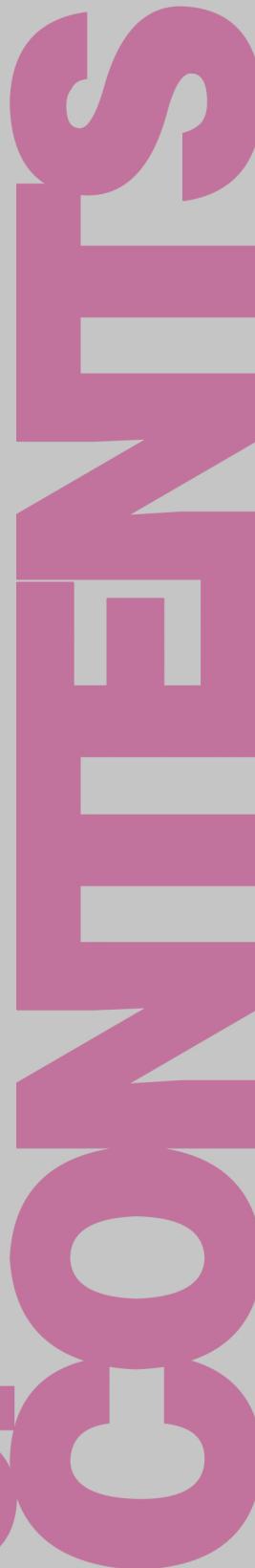


GPUunion

WHITEPAPER

**Decentralized
Cloud Computing Ecosystem**

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Introduction

01

GPUnion is a decentralized cloud computing ecosystem. Built on blockchain technology, GPUnion aims to save the large amounts of computing resources that used to be wasted on mining, and share this power across GPUnion ecosystem. Instead of random hash value mining, resources in GPUnion ecosystem are empowered with modern technologies including artificial intelligence, scientific computing, deep learning, etc. GUT (GPUnion Token) is used as the digital currency among GPUnion ecosystem to settle payments between providers and customers.

Demands of GPU are increasing rapidly. As the deep learning technology becomes more and more popular, data scientists and students are researching different opportunities in this area. GPU could be an essential tool to accelerate the training of deep learning model.

However, most potential users don't have access to stable and guaranteed GPUs. The common way currently is to either use cloud resources or purchase groups of GPUs, which will cost tremendously. With the successful launch of GPUnion project, affordable and powerful GPUs are available to everyone among the ecosystem.

Followed by the launch of GPUnion, numbers of GPU miners(x16r) will join the ecosystem of GPUnion. These miners are also GPU providers who are ready to share their GPU power to any customer in needs. Attracted by a much higher profit than mining on behalf of being GPU providers, more GPU owners will be willing to share their GPU through GPUnion ecosystem. This will resolve the growing conflicts between the hash power wasted for crypto mining and the complex GPU computing demanded by the development of computer science.

02

Mission Statement

Our mission is to change the world from establishing a sharing computing power platform. With our cutting edge technology and brightest professionals, we are dedicated to help both businesses and individuals scale and grow through redistributing computing resources to more valuable projects, including machine learning, rendering, scientific calculating and other tasks that rely on GPUs.

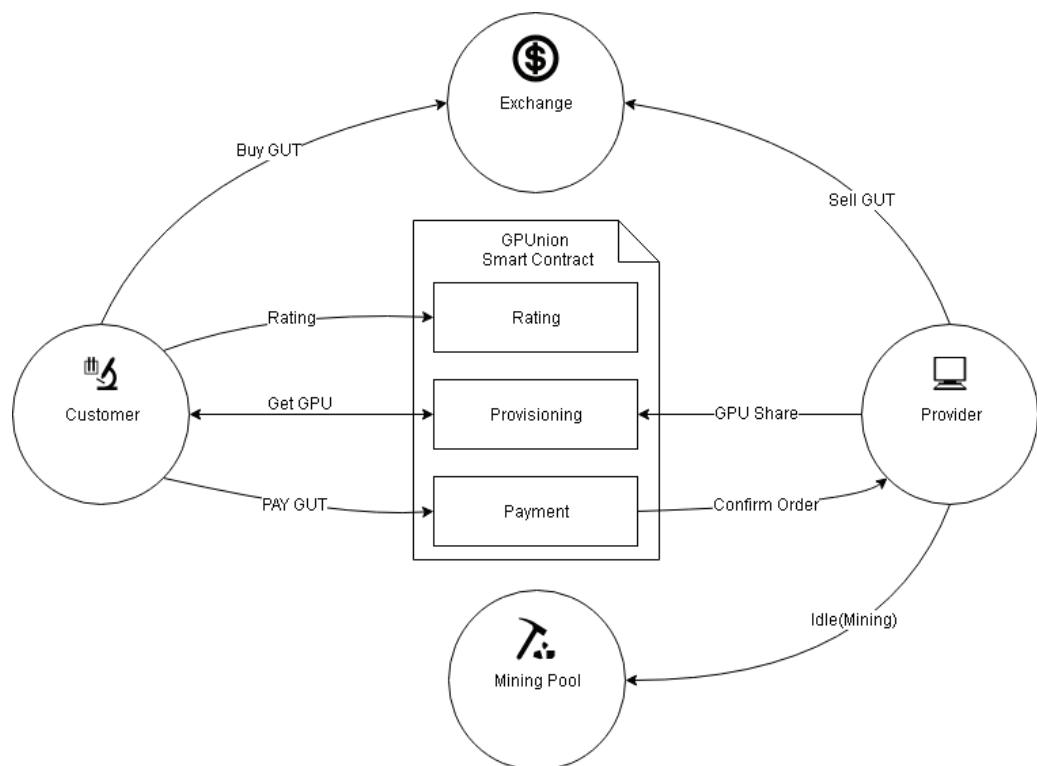


03 GPUUnion Ecosystem

Overview

Providers, customers, mining pools, and exchanges are key roles involved in GPUUnion ecosystem. Computing power is the digital assets that are being traded and transferred across GPUUnion ecosystem.

Ecosystem architecture diagram:



Providers:

GPU owners who share their GPU computing power to customers for computing tasks, and get GUTs as reward.

STATUS:

- Idle: Provider is registered and active in GPUnion ecosystem
- Sharing: GPU resource is provisioned and being available to legit customers.
- Reserved: Future usage of GPU resource is reserved by a specific customer on this provider, but mining is still allowed.
- Disconnect: Provider is not disconnected from GPUnion ecosystem

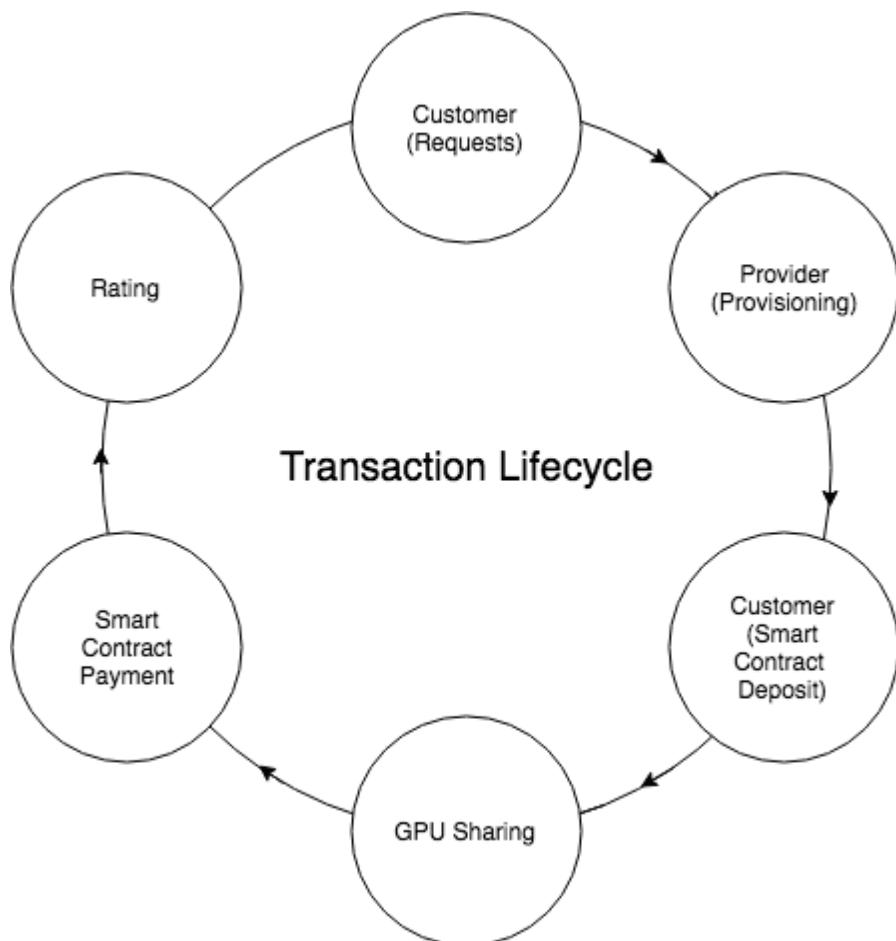
Customer:

Institutional researchers, movie studios, enterprises, or even individuals who need stable and guaranteed GPU cloud computing resources.

Smart Contract:

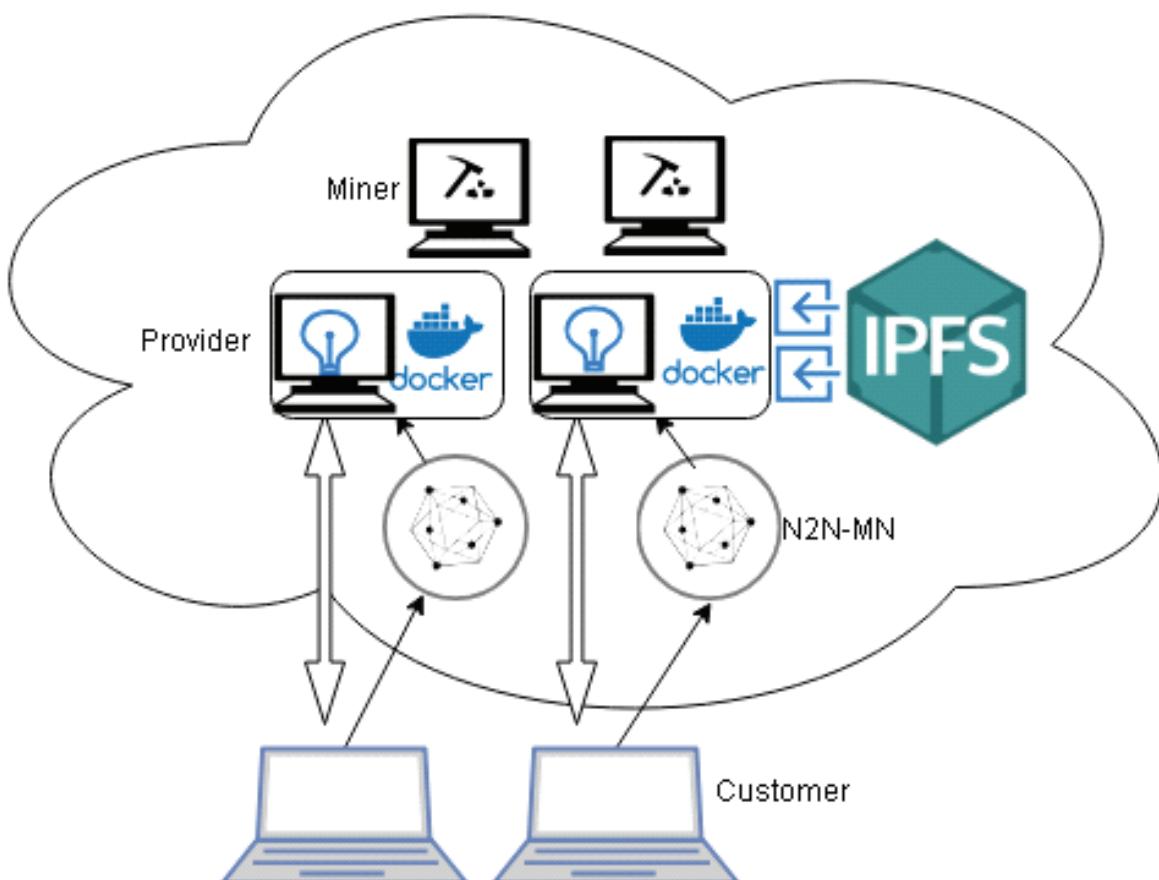
GPUnion ecosystem operates on smart contract.

Exchange: GUT listed exchange.

Computing power transaction lifecycle:

04 Project Overview

Architecture of GPUnion DVM(Decentralized Virtual Machine):



GPUnion DVM is a decentralized GPU resources sharing P2P network. It will have a new designed "N2N-MasterNode" to organize the network and maintain the service being high available. As the first DAPP built on GPUnion ecosystem, the mission of DVM is to share the mining hash power for scientific or research needs.

Milestones

Phase 1: DVM - Stone Age

Proof of Concept

- Reverse tunneling for P2P connection between hosts behind NAT
- Provider/Customer client prototype design & implementation
- Smart contract prototype design & implementation
- POC demonstration on Rinkeby Test Net

Phase 3: DVM - Iron Age

- Rating algorithm
- Customer client GUI
- Provider client GUI
- Endorsing system
- Integration and testing in mainnet

Phase 2: DVM - Bronze Age

- Adapt N2N technology for hole punching to establish connection between hosts with private ip
- Docker for environment flexibility, isolation and security on provider side
- Customer client + UI
- Provider client with CLI

Phase 4: DVM - Steam Age

- IPFS integration to allow docker image customization
- Recommendation system based on location, rating, etc

Phase 5: DVM - Information Age Official Launch!



GPUUnion Fog (Decentralized Cloud Computing):

GPUUnion Fog is a Decentralized Cloud Computing Platform, followed by the launch of GPUUnion DMV. Besides scientific purposes, GPUUnion Fog enables a broader application of sharing power, which will, to a certain extent, facilitate the development of other industries accordingly. Regular users without a clear grasp of coding will be also able to finish complex analysis with Fog Computing Power in GPUUnion.

The Design of GPUUnion Fog will be initiated after the official launch of GPUUnion DVM.

Token Introduction

- Algo: x16s (Anti-asic, GPU friendly)
- Allocation:
- Total Coin Supply: 1,002,000,000 GUT
- 95% Minalbe, 5% premined as Operating Expense
- Token swap:

Token swapping is a two-step process. First, take a snapshot on GPUUnion Token Distribution Chain block at a given height; Second, airdrop equivalent amount of GUTs to the mapped address owners on the mainnet. Since GPUUnion Token Distribution Chain is only used for distribution purpose, the ecosystem will be operated on a major chain that supports smart contract. The token swap will take place on Q1-Q2, 2019, before the release of the first application, GPUUnion DVM.

 July 5 2018

GPUunion Token Distribution
Chain release

Q3-Q4 2018

 Whitepaper Release
GPUunion DVM Release
Exchange Listing

Q1-Q2 2019

GUT Token Swap in mainnet.

Q3-Q4 2019

 GPUunion DVM mainnet release Q4 2019

GPUunion ML testnet Release

Q1 2020

 GPUunion ML mainnet release
GPUunion Fog testnet release Q2 2020GPUunion Fog integrated with IPFS
GPUunion Rendering testnet release

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Q3 2020

 GPUunion Fog mainnet release
GPUunion Rendering mainnet release