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Abstract

This paper proposes the architecture and data flow of ideanet Token. Ideanet Token uses other blockchains like Binance Smart Chain, Polygon or Solana. INET Token has been designed in a way that it has no limitation but is dependent on the transactions throughput of the blockchain. The INET Token protocol is analysed on a 1 gbps network with the 8 cpu and ssd. The result shows that up to 700k transactions per second is possible.

Introduction

Ideanet is a blockchain-based decentralized protocol that aims to provide a secure, scalable and robust device management system for carriers and communications service providers (CSP) to automate the deployment. Globally, more than 10 billion devices are already connected to the internet. Overall the number of devices across all industry verticals is forecast to grow to more than 8 billions within the next 5 years.



Number of IoT connected devices worldwide 2019-2030

Use Cases

INET Token is the fuel of the Ideanet ecosystem which is used to pay the network fee and it can also be used to redeem limited benefits. Users can attach any device to the decentralised ideanet ecosystem and a fee can be paid in the form of an INET Token. Users can also mine INET Tokens by stacking them.

Problems

1) IoT Security Challenges

With the growing Internet of Things (IoT), security is the main challenge. In October 2016, a hacker found a vulnerability in a specific model of security cameras. Nearly 300,000 IoT video recorders started to attack multiple social network websites and brought down Twitter and other high-profile platforms, for almost two hours. This attack is just an example of what can happen to IoT devices with poor security.

The more variations of IoT devices we see out there, the more complex IoT security problems will become.

2) Lack of Compliance On the Part Of IoT Manufacturer

New IoT devices come out almost daily, all with undiscovered vulnerabilities. For example, most fitness trackers with Bluetooth remain visible after the first pairing, a smart refrigerator can expose Gmail login credentials, and a smart fingerprint padlock can be accessed with a Bluetooth key that has the same MAC address as the padlock device. This is precisely one of the biggest security issues with IoT. While there is a lack of universal IoT security standards, manufacturers will continue creating devices with poor security.

3) Lack of IoT devices Access

Ensuring the physical security of an IoT device begins with the manufacturer. But building a secure device management system is a challenging task for manufacturers nonetheless. This is where ideanet's most secure and decentralized platform comes into the play.

4) Lack of User Knowledge

IoT is a new technology, and people still do not know much about it. While most of the risks of IoT security issues are still on the Manufacturers and Device Management side. One of the biggest IoT security risks and challenges is the user's ignorance and lack of awareness of the IoT functionality. As a result, everybody is put at risk.

Solutions

Installed by hundreds of carriers and Communication Service Providers (CSPs) worldwide, INET A blockchain based fully decentralised platform, is a secure, scalable, and robust device management solution enabling customers to automate the deployment and support of data, VoIP, and IPTV in general IoT. The solution provisions and manages devices such as gateways, routers, IPTV STBs, IP Phones, femtocells, mobile hotspots, dongles, storage devices, and more. Our mission is to make each and every device secure by connecting them to a decentralized ideanet ecosystem.



Main Features

- Any device on any network stamped into a Blockchain
- Schedule firmware updates, restarts etc...
- Capability to monitor and block denial of service attack
- File-based device management (IP-Phones management)
- Devices behind NAT (via STUN or XMPP) detection and control
- Residential and enterprise provisioning scenarios
- Auto provisioning capabilities means zero-touch control
- Multi-tenant and multi-hierarchy deployments
- IPv4 and IPv6 support
- Powerful API's support



Blockchain Use Case in the ideanet

The INET bridge is a blockchain-based smart layer which enables connections between the data management engine, public blockchain layer and IoT. When the device is connected for the first time, the record is created on the public blockchain and INET Token is minted. The amount of INET Token could also be burned to control inflation. The INET Token is not burned for every transaction though, it totally depends on the circulating supply. The minted INET Token is actually a reward which is sent to the owner of the device. The public blockchain could be Binance smart chain, Polygon smart chain or Solana. The reason to choose these 3 blockchains is, a nature to be cross-chain compatible while allowing users to benefit from the blockchain technology. We also found them best among others in regards to digital record keeping in the form of ledger-based transactions and low gas fees.



Once the record is generated on the public blockchain, the device history is saved for life. Any further communication will not be recorded on the blockchain but on the INET Node (Node ledger). The more devices you bring to the network, the more reward you get in the form of INET Tokens. This INET Token can also be used as a fee for the INET service. Without a need of extra development or manual customization (i.e., no need for professional services, template creation, scriptwriting, etc.) The user interface is automatically adjusted according to the device's data mode. The device in the ecosystem is recognized from some of the device parameters like MAC address, device type and model.

Token Statistics

Token name: Ideanet Token

Token symbol: INET

Max Supply: 10,000,000,000

Initial Circulation Supply: 460,000,000

Startup Sale Supply: 20,000,000

Teams (15.0%) 2 years term with quarterly unlock.

Token Type: BEP-20

Contract: 0xd031d7a1b9c80f2c6122a9fd76e3c53a1bc404f6

Token Allocation



Roadmap



