Rados Whitepaper

Contents

Chapter 1

Abstract

Blockchain technology enables three key features that make the new generation online businesses more attractive to investors compared to traditional internet-based services:

1. **Instant liquidity of investment.** Tokens minted during ICO are not subject to government over-regulation, and can be traded on exchanges instantly.

2. **Aligned incentives.** Fixed emission of the underlying cryptocurrency, combined with business's desire to grow the number of active users steadily increases demand over time, which in turn increases the token's price. This benefits both the founders and the project's investors equally, ensuring there is no imbalance in this partnership. The more successful the business is, the higher demand, the higher the token's price.

3. **Transparency.** Since all financial transactions are on a public blockchain, investors can see all key metrics updated in real time, unlike each quarter for stock exchange listed traditional corporations. This allows investors to make educated decisions based on facts about buying or selling the business's token, eliminating speculation and letting the free market agree on a fair price. This is in contrast to most existing projects that are highly over speculated, and where investors are driven by rumours and act on "insider" information that they are unable to verify.

Rados harnesses these new developments and provides unprecedented and much needed transparency to investors, powered by the Ethereum blockchain.

Chapter 2

Mission

Our mission is to provide accurate and timely data to everyone in the cryptocurrency community. We plan to build the most comprehensive investor portal and empower our subscribers to make wise investment decisions.

2.1 Data Quality

There is an abundance of services that promise to give you trading signals, yet nobody says where their data is coming from. As of today, the best cryptocurrency data aggregator is coinmarketcap[1], but they explicitly say that they refresh their datasets once every five minutes which is not frequent enough for real-time trading applications. On top of that, neither coinmarketcap nor exchanges provide detailed historical datasets even though they possess this information.

To make matters worse, every exchange provides data in a new format that is impossible to easily reconcile. There is no correct answer to "how much is 1 ETH" because the price is different for every exchange. Thus, when someone provides you with a one number answer they are not being perfectly honest with you. If you can't compare exchange rates among various platforms you might be missing out on arbitrage[2] opportunities.

To sum it up, if you want to build trading strategies you need the highest quality of data that does not currently exist anywhere on the internet. It is our mission to build the most comprehensive database of all cryptocurrency related information and to provide our subscribers with the pulse feed of every cryptocurrency.

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[1]https://coinmarketcap.com
[2]https://en.wikipedia.org/wiki/Arbitrage

2.2   Discovery

After we solve the data ingestion problem we immediately face another one: when there's too much data available it's easy to get overwhelmed and be unable to process it efficiently without specialized tools. Rados will deliver a customizable dashboard where you will be able to pick only the currencies and metrics that you care about and hide the rest, or pick curated presets from our library. The next phase would be to employ machine learning techniques to help our subscribers discover new cryptocurrencies and ICOs, provide price predictions and monitor investments.

2.3   Community

> If you want to go fast, go alone. If you want to go far, go together.

We will actively engage with our community, collect feedback on our existing offerings and eliciting requirements for new tools and services. Every quarter we will release an updated roadmap proposal that our subscribers and investors can critique or endorse. Every roadmap proposal will be accompanied by a voting smart contract, ensuring transparency of Rados's strategic decision making. At the end of the voting period top projects will be added to our roadmap.

Let's work together to build the toolbox of a modern investor.

Chapter 3

Data Sources

There are four distinct types of data that, when combined, cover how people use a particular cryptocurrency (blockchain data), what people think about it (community data), what people think the cryptocurrency is worth (market data), and what the development team is doing with their project and how they track against their promises (development data).

3.1 Market data

Market data is all of the information that is being originated on cryptocurrency exchanges. We will use APIs[1] in order to access this information and make it available to our subscribers.

3.1.1 Platforms

We will start with integrating with the most popular exchanges, and plan to add more in the future.

- Poloniex
- Kraken
- Bittrex
- Bitfinex
- Coinbase
- LocalBitcoins

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[1]https://en.wikipedia.org/wiki/Application__programming__interface

3.1.2 Metrics

For each exchange we will acquire and/or calculate the following metrics for each available trading pair[2]:

- Exchange rate
- Transaction volume
- Bid-ask spread
- Order book
- Market cap

3.2 Blockchain data

Exploring blockchain data is the most sure way to find out how the token is being used. It is the closest proxy to a cryptocurrency's utility. For example, if you have invested in an online betting platform, you would want to know statistics such as number of users and average transaction amount in order to assess whether current market price is undervalued, overvalued, or just right.

3.2.1 Platforms

Each cryptocurrency runs either on its own blockchain (such as bitcoin, litecoin, ethereum), or is implemented as a smart contract on top of an existing blockchain (like ethereum, waves, NEM). We'll call the first kind *platforms*, and the second *applications*. Metrics aggregation modules have to be written differently for platforms and applications, and some of them are only available for platforms.

3.2.2 Metrics

- Emission
- Network hashrate[3]
- On-chain transaction volume
- Block size
- Number of unique wallets
- Number of unique funded wallets
- Number of users

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[2]https://en.wikipedia.org/wiki/Currency_pair
[3]Only for Proof-of-Work blockchain platforms

3.3 Community data

Each cryptocurrency represents a community of people who bought into its vision and have invested in it. It is humanly impossible to keep track of what people are saying online about each and every cryptocurrency. However, it is possible to calculate aggregate statistics that shed light on how active the community is and whether the community is pleased and optimistic or dissatisfied.

3.3.1 Platforms

- Reddit
- Bitcointalks
- Steemit
- Telegram
- Twitter
- Slack

3.3.2 Metrics

- Message count
- User count
- Developer/founder presence number of users
- Google search trends
- Message sentiment[4]

3.4 Development data

This data is notoriously hard to acquire because it's hidden in plain sight behind marketing speak, and the founders are generally disincentivized to share it should their project underperform. However, this data is too important to overlook and we will strive to get the full picture by crowdsourcing the missing pieces.

When available, we will fetch the following metrics:

- Development activity (if a cryptocurrency is open-source)
- Roadmap tracker

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[4]https://en.wikipedia.org/wiki/Sentiment_analysis

Chapter 4

How It Works

We envision a future where each business will have its own cryptocurrency token and will accept payments exclusively in that currency. This way, if you track all of the token's transactions on the blockchain, you get a full picture of the business's solvency. For Rados, this token will be Saturn (STN).

Saturn is an ERC20[1] token on Ethereum blockchain. We chose Ethereum because of the existing infrastructure of miners, wallets and exchanges. Saturn's integration with Rados will be implemented as a series of Ethereum smart contracts to make sure that every financial transaction is publicly visible, transparent and verifiable by any third party.

Any existing internet business model can be implemented on top of Saturn's technology. Rados will be the first business to use Saturn as the payment currency for premium service subscriptions. We plan to launch other businesses on top of Saturn's technology and Rados's datasets which will increase overall demand for this token. Examples of such services include but aren't limited to ICO consulting, cloud mining, fund management, predictive analytics, etc.

Rados itself will be implemented as a SaaS[2] on top of a battle tested, mature web technology stack. Rados will run on Google Cloud Platform[3], using the same infrastructure that powers Google's own services.

Figures 4.1 and 4.2 describe rados.io software architecture.

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[1]https://themerkle.com/what-is-the-erc20-ethereum-token-standard/
[2]https://en.wikipedia.org/wiki/Software_as_a_service
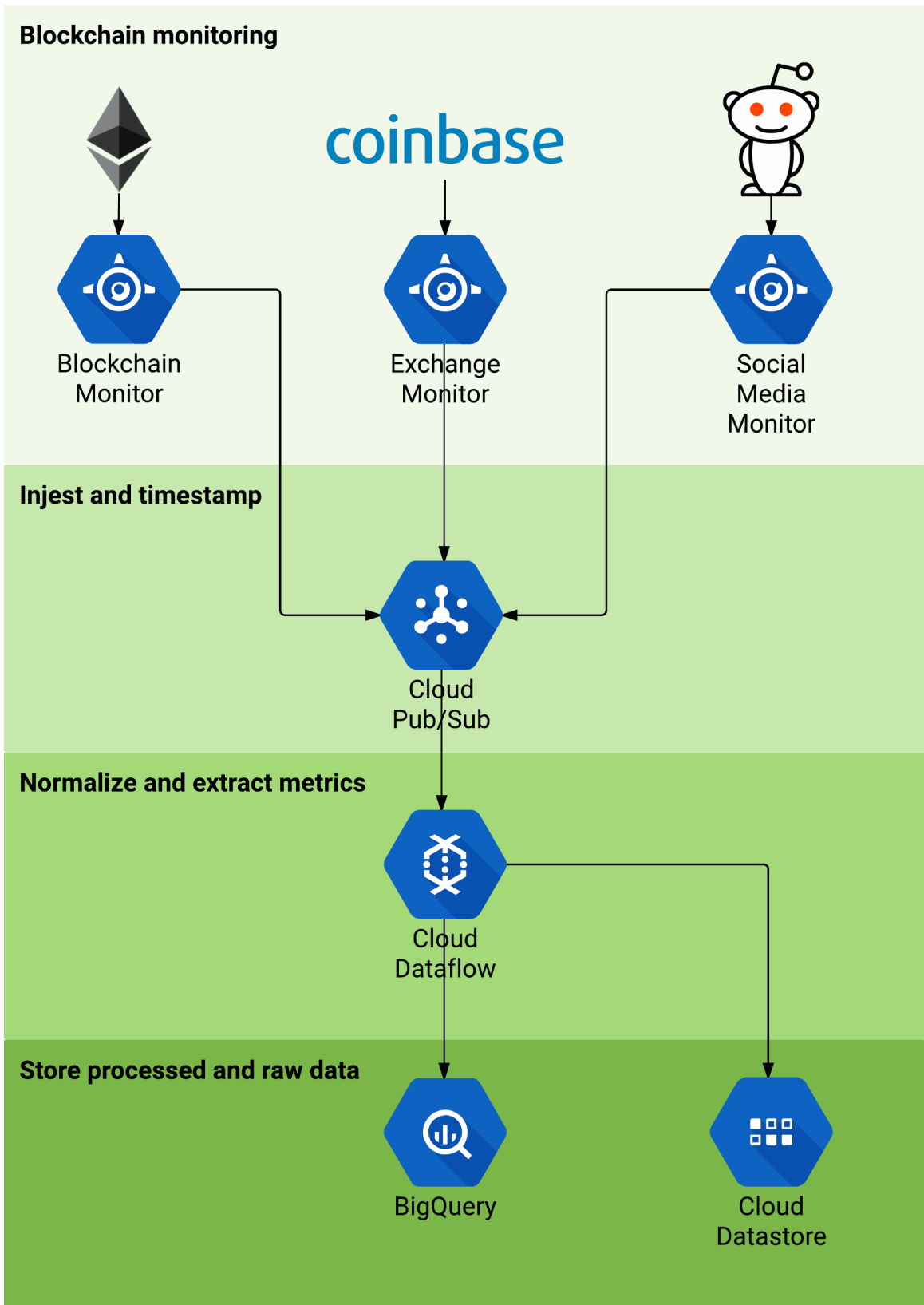[3]https://cloud.google.com/

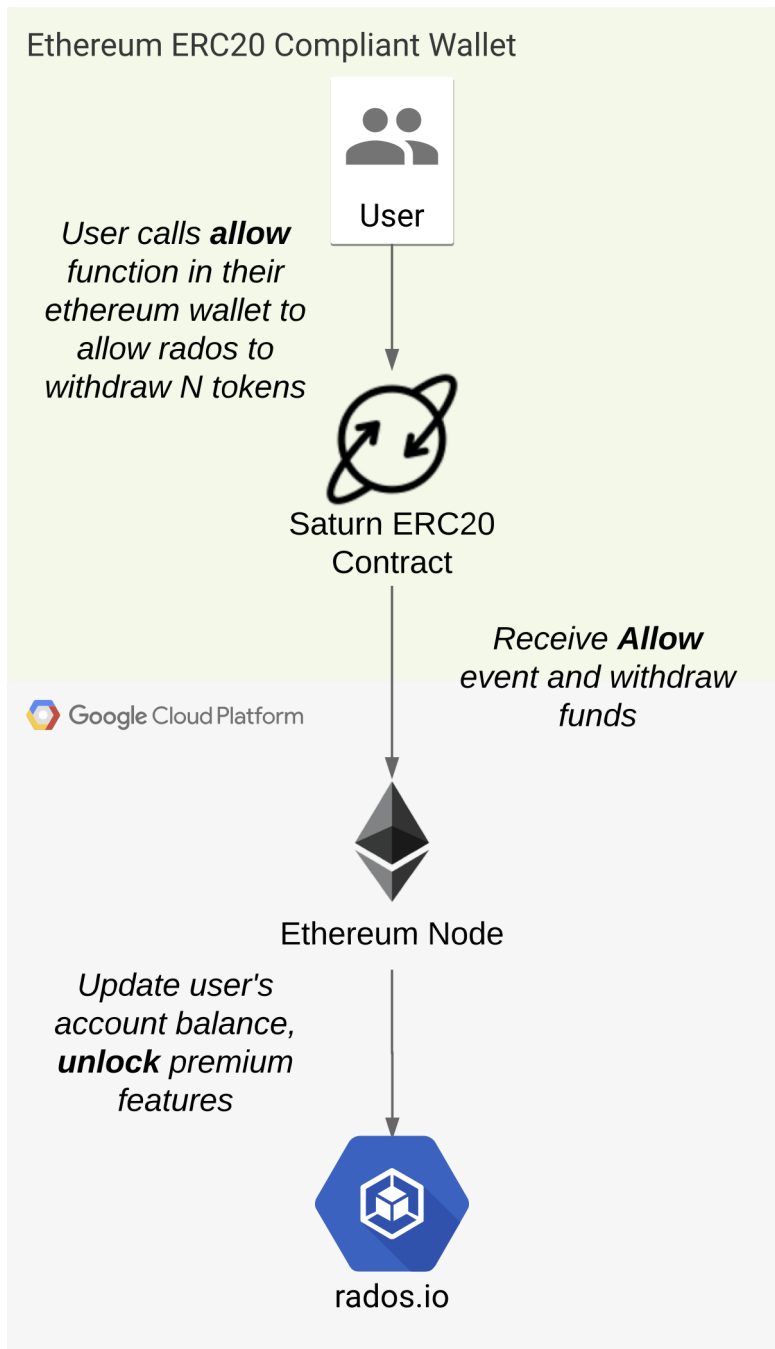Figure 4.1: Blockchain data ingestion pipeline architecture

Figure 4.2: Subscription management architecture

Chapter 5

Roadmap

The roadmap for 2017 has been decided upon and is published in table 5.1. Going forward, the roadmap will be curated by the community through the voting mechanism. Every quarter we will ask our subscribers for feedback and listen to their suggestions on what can be added and improved. We will curate the suggestions and create a poll. Every Saturn token holder will be able to vote for the features that they would like to see implemented, and the most popular features will find their way into the roadmap.

Table 5.1: Rados 2017 Roadmap

Date	Event
2017-07-24	Launch Pre-ICO website and release whitepaper
2017-07-28	Integrate litecoin payments gateway for Pre-ICO token purchase
2017-07-29	Start Saturn smart contract implementation
2017-07-31	Pre-ICO start
2017-08-15	Kick-off Saturn QA in testnet
2017-08-21	Complete smart contract security audit
2017-08-22	Release Saturn whitepaper
2017-09-01	Release Saturn token on Ethereum blockchain
2017-09-01	Distribute tokens to Pre-ICO investors
2017-09-01	ICO start
2017-09-10	Release Rados.io alpha
2017-11-11	Release Rados.io beta
2017-12-01	ICO end
2017-12-01	Publish 2018 roadmap proposal and voting smart contract
2017-12-25	Publish 2018 roadmap
2018-01-01	List Saturn token on cryptocurrency exchanges

Chapter 6

ICO Terms

6.1 Token Distribution

Total Saturn (STN) emission is **200,000** tokens. **80%** of the tokens will be sold to investors. Namely, **15%** will be sold during Pre-ICO, and **65%** during ICO. **5%** of the tokens will be allocated to fund the referral program, and the remaining **15%** will be reserved for development and business operations needs.

6.2 Pre-ICO terms

Early adopters can purchase **STN** at a discounted rate during Pre-ICO.

Because of bitcoin's instability[1] due to scaling reasons around the timeframe of our pre-sale, and because of ethereum's recent wallet hacks[2], we decided to launch our Pre-ICO on litecoin.

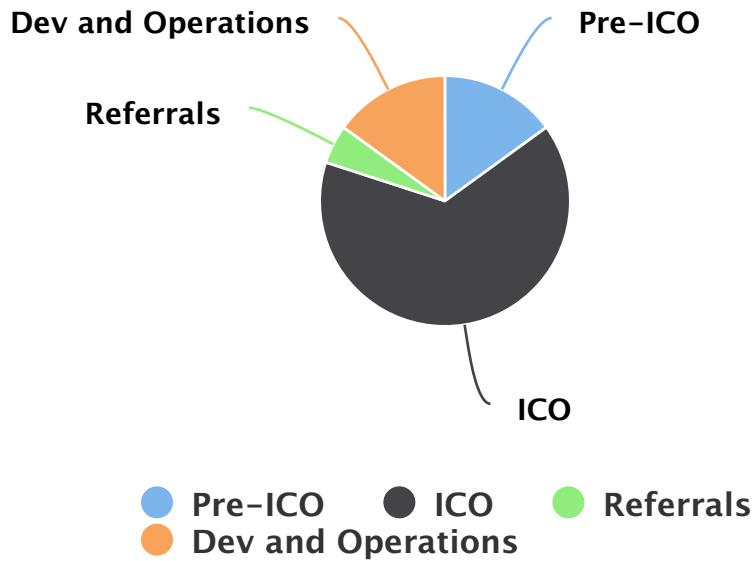We chose litecoin for the following reasons:

- **Mature and stable blockchain.** Litecoin shares the bulk of the codebase with bitcoin, and has been operating for four years without a network failure.
- **Stable tooling.** Every investor will receive a unique *LTC* address. This allows us to track contributions and allocate a proper amount of *STN* tokens when Saturn goes live on Ethereum blockchain.
- **Low commissions[3].** Unlike bitcoin, litecoin has already activated segwit[4], so the

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[1]It is not recommended to transact in bitcoin during the first week of August because of the politics involved in bitcoin's upcoming forks https://steemit.com/cryptocurrency/@jephline/the-problem-bitcoin-is-currently-facing

[2]We walk the extra mile to make sure that investor's money doesn't get stolen by hackers, that's why we will not publish our Ethereum smart contract until we go through a security audit. http://www.businessinsider.com/report-hackers-stole-32-million-in-ethereum-after-a-parity-breach-2017-7

[3]Average transaction fee on litecoin network is about 0.064 USD https://bitinfocharts.com/litecoin/

[4]http://www.coindesk.com/litecoins-segwit-activation-why-it-matters-and-whats-next/

Figure 6.1: Saturn token distribution

network has enough capacity to process transactions even during peak hours. This means that you'll never have to pay exorbitant[5] fees.

- **Fast transaction speed.** With an average block time of about two minutes, you will be able to confirm whether your transaction succeeded about five times faster compared to bitcoin.

STN tokens will be sold for 5 LTC = 1 STN during Pre-ICO, which roughly corresponds to 1 ETH = 1 STN according to coinmarketcap's prices at the moment of writing this whitepaper.

6.3   ICO terms

We will launch Saturn ICO after we complete security audit and validate smart contract's integrity on the testnet. Our target date for ICO launch is **September, 1st 2017** and will last until all tokens are sold or on **December, 1st 2017**, whichever comes first. Unsold tokens will be reallocated to *Dev and Operations*.

ICO will be broken down in a number of rounds, with a fixed amount of tokens allocated for each round. When all the tokens for a given round have been sold a new round will begin.

ICO pricing structure is outlined in table 6.1.

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[5]https://goo.gl/YZxmdZ

Table 6.1: Saturn (STN) ICO structure

Round	Price	Token Amount
1	1.1 ETH = 1 STN	30,000 STN
2	1.2 ETH = 1 STN	23,000 STN
3	1.3 ETH = 1 STN	20,000 STN
4	1.4 ETH = 1 STN	15,000 STN
5	1.5 ETH = 1 STN	13,500 STN
6	1.6 ETH = 1 STN	10,500 STN
7	1.7 ETH = 1 STN	7,500 STN
8	1.8 ETH = 1 STN	6,000 STN
9	1.9 ETH = 1 STN	4,500 STN