NIRMANA

**Motivation**

From the time web2 revolution started, there has been a sudden surge in innovation and technology, it has led humans to continue becoming a powerful galactic race. Despite these sudden advancements, we are not yet able to properly secure privacy of the user’s data on internet. Due to this, there has been a giant surge in privacy thefts, data thefts, location disclosure, piracy and so on.

I would like to share a real life example which clearly shows how our data in the form of chat messages are not secured. How our privacy is a hoax :

I was texting one of my close friend and suddenly at the notification bar, I started getting reply option to the message my friend set me. Seeing this I was surprised, a bit fearful and most importantly threatened. Threatened by the fact that these tech giants has all our secrets, access to the most confidential things and documents we have shared.

Does this make you worried too? Yes it should cause this is not just one person who is facing the privacy theft, it is you, your family and your loved ones.

It should have been cleared now that in today’s world there is no security of our personal data on internet. This being stated I would also like to say that this is not the mistake of present tech companies, it is the technological restraint and the \*not privacy centric\* architectures these tech giants have been build upon.

**Present Day Architecture**

Present day architecture on which all the applications are built is the client-server architecture which is a centralised architecture. The basic working of it is that there are many different users of a particular application and each user acts as a client, connected to one centralised server from where the user asks for the application to run on their respective devices.

On this server, resides all the data of application and their users. Though an organisation might say that they don’t use their data in a wrong way but they do and there has been many such scams where a company sells user’s data for hundred millions of dollars.

You can think on your own that if they have all our data, wouldn’t they be using it for their benefit, seeing them without our permission. This is a vast school of thought and I leave it to you to ponder about this scary fact on your own. I will leave some links in the resources so that you can search about it some more.

**WEB-3: The World Of Dapps**

Th initial step towards a web3 world was taken in the year 2008 when the bitcoin first emerged. After the crash of the market, it helped the scholars to move towards a decentralised word. A safer medium of transaction and finance in the world came into picture. Emergence of bitcoin played a critical role in inspiring young individuals at that time to even think of something like that. Bitcoin was a revolution in the internet world, there’s no doubt about it.

Bitcoin not only worked out as a cruptocurrency but it made people aware of the blockchain technology working under the bitcoin architecture.

As time passed, people started thinking and developing on blockchain technology.

In the late 2013, one great mind showed the world how using this safe and secured technology decentralised apps can be made. He was none other than Vitalik Buterin, the founder of Ethereum. Ethereum completely changed the world with its EVM and the feature of smart contracts to develop Dapps. This helped reduced the centralisation aspects and increased transparency and security.

Ethereum officially launched in 2015 and since then the web3 world has emerged like crazy. Many other blockchain platform came into existence like solana, aptos, polygon and many other, each having a unique characteristic feature. Many new tech like crypto currencies, mataverse, alt coins, decentralised finance also emerged using blockchain as the backbone.

As web3 world expanded, the need for a decentralised internet experience emerged. But there has not been a technology which actually in its entirety made user’s data saved securely on their devices with no involvement of any other party.

In order to achieve this, we came up with a ground-breaking solution to revolutionise the entire internet world. When this technology will be launched, it will completely change how we look at internet and perceive it.

More information about bitcoin, cryptos, metaverse, Ethereum, smart contracts and defi will be provided in the resources section. You can read and research about these emerging technologies.

**Solution**

By the previous section, it should have been cleared that there is no real privacy on internet with the present technologies and architectures existing in the market. Now the question arises, what is the solution to this ?

Don’t worry! we are here to solve this big problem. It is our determination to work had for this cause and make the change in society. We are all set to devote our time and efforts completely to build this solution.

Solution is easy to grasp!

To understand the solution let us first start with a thought experiment.

**Thought experiment - “**Consider you are a user working on a web2 based application. As you know that your data is transmitting to the application’s server, wouldn’t it be all solved if the data remained at your device only? “

Yes, this is the solution! Isn’t it so simple?

I know you might be thinking if this is the solution, so simple and straight forward, why does anyone have not yet build upon this solution and if no one has build anything on it, is the solution really buildable?

Well we don’t know why anyone has not yet build it but we can certainly answer the last question that YES it is buildable and we are working on it!

So how does it work? How does it look?

To answer that, let me take you into a deeper journey of how the product will work in the next section……….

 **The Product: NIRMANA**

We propose a software architecture which will secure user’s data in the most transparent way possible. NIRMANA is a platform which will work as the backbone of future internet world. It will work as the key part in Nirmana architecture.

Below is the detailed working and explanation of Nirmana architecture and its components.

  **Nirmana Architecture**

USER [KING]

 NIRMANA LAYER

APPLICATION LAYER

OPERATING SYSTEM LAYER

 Mobile/Desktop

Operating System Layer

In this layer, we are looking at the root, which is the operating system on which everything runs. There are various type of Operating Systems in the market like windows, mac os, linux, etc.

Place where we will make the difference is we will be creating our software for Mobile users too. We will cater to the largest sector of internet users. Both android and ios. We will develop for everyone as we want to achieve the vision of a world without any security theft and utmost privacy.

Nirmana Layer [most important ]

 NIRMANA ENGINE

STATE HOLDER

CONNECTOR

transmitter

C 3

CRYPTOGRAPHIC LAYER

CONTAINER INITIALIZER

C 2

C 1

Consider Nirmana Engine as the heart of Nirmana architecture. Within this Engine there are various components which together binds everything together.

Let us understand the working now…

* Nirmana software and the application software are two different identities. Anyone who wants to use this technology will have to download the Nirmana software first.
* With applications build using Nirmana connector bundle can now interact with the software and enable the magic in your life. (Refer to the Application layer section for more details)
* When both are installed, user can now use the app seamlessly without worrying about the privacy of their data.
* When app will make connection with the Software, Nirmana engine will get active and initialise the creation of CSC – Cryptographically Secured Containers.
* All the data that user will be generating, will automatically be compressed and gets saved in those CSC.
* In simple terms this is how the Nirmana architecture will be working.

For deeper understanding, let us now look into segments of architecture…..

DIFFERENT PARTS OF NIRMANA ENGINE:

* State Holder – It will continuously be saving the state of the engine. For optimisation, when no app will be working, it will be in rest state, as soon as the connection is made, it will get into the running state and the initialization of the container initialiser will begun. This is important because whenever the app will not be in work, state holder will automatically go in the rest state binding and saving the data into containers instantly.
* Connector – This will be responsible for making the connection between the app and Nirmana. This connection will be active throughout the usage phase of the app.
* Container Initialiser- This will be consisting of any internal cryptographic layer which will be creating containers and securing them cryptographically. Initialiser will create containers and cryptographic layer will be securing them.
* CSC – Cryptographically Secured Containers – These are the most amazing thing you’ll see. This needs a broader explanation so to understand it better, go through the following diagram….

 CSC -1

 Hashed connection

 CSC

META DATA

DATA

+

CSC-2

META DATA

DATA

Container hashing and meta data

Container hashing refers to the process by which containers will be linked together using public key and private key cryptography similar to a blockchain.

Meta data is the part which stores all the necessary information of a particular CSC. For example Data sets that will be stored as meta data are –

* CSC number like 1,2,3,4……..
* Timestamp when CSC will be created
* CSC capacity, meaning how much data can one CSC occupy. For example 100mb, 400mb 1tb and so on.
* Hash of the previous CSC and hash to the next CSC. I would like to point out that hash won’t be calculated using data but timestamp, CSC number and hashes of previous CSC.

Besides meta data, there will be data residing in the CSC only accessible to the user. I would like to point out that no data will be used to hash the CSC. We won’t use your data even a little bit. Data of the user may include, emails, confidential data, passwords, phone numbers, images, video and audio files.

Application Layer

In this layer, exists the application which user will be using. There will be a special way in which applications must be developed in order to use the Nirmana technology. There will be connector bundle given using which a developer can create Yapp (your app). When the application will start, it will look for the nirmana software to make connection with, to start the N- engine and initialize the CCS after the authentication. Application can be made in usual Javascript-node stack, connector bundle can be easily used similar to a database connector.

User[King] layer

User is the king, we value this sentiment the most and thus we have made it our slogan! Everything that we do and have been doing is to benefit every single person in the world. We want user to be the king of their data always and forever. This is the benchmark and people should not accept anything less. We are working continuously to give users the best experience, best security and most importantly utmost privacy. We will for you, for the rights and benefit of you, all our life !

**The Nirmana Ecosystem**

With the development of this technology, we open up a world for immense innovation and development. It can be used only for securing data but as Cloud service, Blockchain as a service platform and so on.

So now I would like to take you on a journey which really defines the grant scale of Nirmana……

Nirmana ecosystem will not only consists of this data storage mechanism but will spread its use cases to a larger domain.

We will be launching apps in every space using our Nirmana technology and will enter into each market whether it be social media, fintech, nft, Defi, dbms and most Importantly Cloud services.

Nirmana ecosystem will give services like Nirmana Cloud where big organisations, hospitals, manufacturers can securely store their data on our cloud service where their data will only be visible and accessible to them.

Nirmana ecosystem will completely change the world. It will be the biggest revolution in the internet world.

**Pipeline**

Our pipeline also include a new age mobile Operating system developed on the Nirmana architecture so that users can experience the epitome of security and privacy.

Nirmana Ecosystem

Nirmana operating system

Nirmana Architecture

**Summary**

The crux of the deal is yes, we are the future and we will definitely change and start a revolution in the society. With so much security and privacy, stress will be less, a sense of trust will start building up on internet, harmony will increase, no leaks and scandals will take place. In summary, we will be creating an advance, secured and most importantly happier society.

In order to speed up the build process, we will be launching our ICO soon, so stay connected to us and we, together as a human race will evolve into a great galactic race.

**Connect with us**

You can connect with us through following ways –

Email – yuvrajdixit2003@gmail.com

Linkedin – https://www.linkedin.com/company/99936268/admin/feed/posts/

**Resources**

<https://www.forbes.com/sites/forbestechcouncil/2022/02/16/what-does-big-tech-actually-do-with-your-data/?sh=10d504a515f7>

<https://economictimes.indiatimes.com/tech/technology/how-tech-giants-cut-corners-to-harvest-data-for-ai/articleshow/109093168.cms>

<https://bitcoin.org/en/bitcoin-paper>

<https://www.freecodecamp.org/news/what-is-web3/>

<https://ethereum.org/en/whitepaper/>

<https://www.ibm.com/topics/smart-contracts>

<https://www.ibm.com/topics/containerization>

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