First decentralized application
performance monitoring

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Abstract

The organization, today, looks for a solution that helps to monitor and quantify the speed and efficiency of the business critical applications to run smoothly and ensure best end-user experience. To save on the valuable productivity time and revenue, organizations are investing in application management software by getting services both on-premises and as-a-service delivery options. The solution provides you with 360-degree view of business applications to help resolve performance problem and find root causes before they disrupt critical services. With Pingchain, we intend to provide this solution at a new and different level by having blockchain as the backbone of the entire system, just to ensure that decentralization and all the benefits that come with blockchain are adequately maintained.

Intro-duc-tion

Most organizations use some kind of network monitoring software to monitor network assets. A standard network monitoring system will track devices for uptime, bandwidth usage and monitor system performance. While this type of monitoring solution is beneficial for when issues occur on the network, it doesn't help when there is an issue with an application. Most large organizations have a wide variety of applications to support. Some of these applications include enterprise wide applications that every user has installed on their computer. When a critical application like this is not performing efficiently or cannot be accessed, you can be assured the helpdesk phones will keep ringing. Having the right tools to monitor application performance issues can be a life saver and prevent a flood of calls.

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WHY THE NEED FOR APPLICATION MONITORING?

Firstly, you need to be aware that application monitoring is not the same as monitoring the network. The simple way to explain the difference is that network monitoring tells you when users can't access an application. However, application monitoring alerts you when an application is not working properly, even if users are capable of accessing it. For example, say all of a sudden your users cannot access Sharepoint. Your network monitoring software shows no problems on the network so you start troubleshooting the Sharepoint server. After taking the time to sift through the event logs and other various log files, you finally come across a service that had stopped on the server. The Network monitoring system could not tell us that, it just eliminated any issues on the network.

An application monitoring program would have alerted an administrator that something had failed on the server. Being able to swiftly identify issues with organizations' applications will make the life of a systems administrator much easier. It also ensures that the applications are performing as expected.

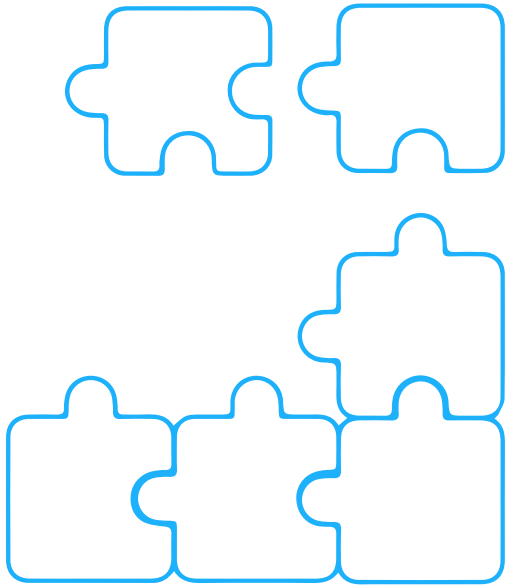
Good application monitoring will give you an immediate visual overview of your applications, trend reporting, performance analysis and identify growth areas. All of this information is important when it comes to planning, meeting SLAs and finding problems before they bring about major outages.

PROBLEM STATEMENT

Upon all the benefits customers can derive from application performance monitoring, they still do face the challenge of lack of decentralization in the existing platforms that offer those solutions, hence, the security of the application performance isn't ensured. This causes customers to lose faith in the results provided by these application performance monitoring platforms because the results they see could have been manipulated just to make the clients use the solutions recommended by these platforms.

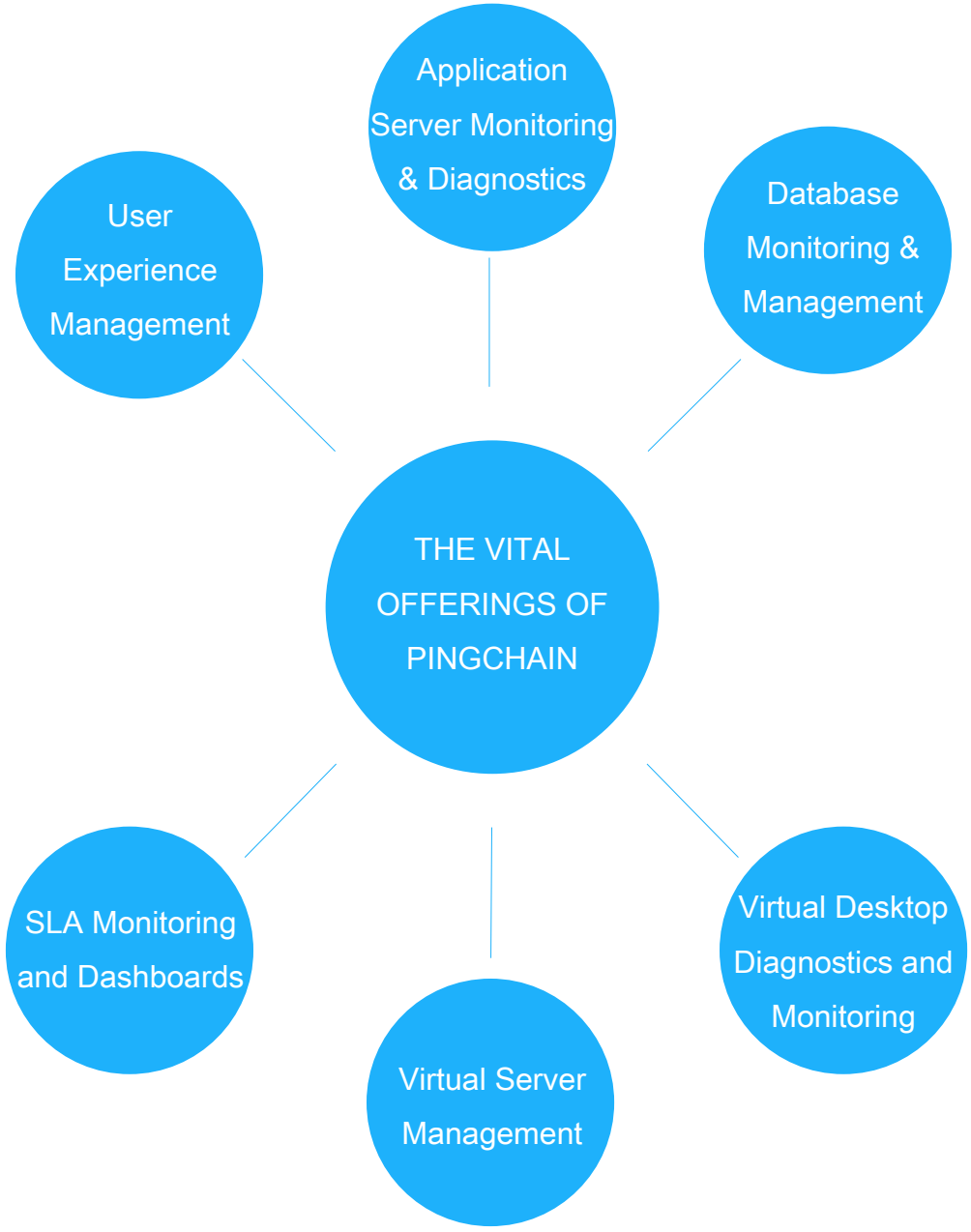
With increasing complexity of application delivery chains, it becomes harder for companies to maintain the performance of their services. Additionally, the number of users increases exponentially, which causes scalability issues for their applications as seen on the crypto currency exchange markets.

Traditionally, it is challenging to monitor the performance of services for all users from all over the world which leads to downtimes.



The First Decentralized Application Performance Monitoring Solution.

Pingchain provides a platform to secure your application performance on the block-chain. We create a base to monitor every service from all over the world with theoretical-ly unlimited number of nodes. Everybody can now ensure that the monitoring results and reports are trustworthy, independent and transparent, because the Pingchain service runs on the blockchain.
Every device can participate in the network and get rewarded by providing their bandwidth to the community. PingCoin (PCX) builds the foundation of the platform and is used as a commodity to run the network.


Application Server Monitoring & Diagnostics
User Experience Management
Database Monitoring & Management
THE VITAL OFFERINGS OF PINGCHAIN
SLA Monitoring and Dashboards
Virtual Server Management
Virtual Desktop Diagnostics and Monitoring

The vital offering of Pingchain:

User Experience Management:

Identify and resolve response time by managing performance SLA and measuring data on user interactions.

- Synthetic User Record and Playback
- Real User Performance Monitoring
- Real User Session Capture and Replay
- Business Analysis Data Mart

Database Monitoring and Management:

Provide consistent performance monitoring and management across varied database platforms, helping you reduce administrative costs and improve service levels.

- Database Monitoring
- Real-time Database Diagnostics
- Database Workload Analysis
- Database Tuning

Virtual Server Management:

Minimize hardware costs and identify/fix problems faster with deep visibility into VMware ESXi and Hyper-V performance management issues. The solution for virtual server monitoring and capacity management provides powerful virtual infrastructure monitoring, capacity planning,

Application Server Monitoring and Diagnostics:

Prevent problems before it disrupts critical services and violate service level agreement (SLA).

- Application Server Monitoring
- Component-Level Monitoring
- Transaction Tracing
- Web Server Monitoring
- Message Queue Monitoring

SLA Monitoring and Dashboards:

SLA monitoring solution feeds crucial application and service management information into the existing framework. SLA policies & reports are developed to improve service quality and minimize any disruption. These policies are created by using data from performance, availability and change across from the IT environment.

- Role-based Dashboards
- Dependency Mapping
- Service Definitions
- Component Discovery
- SLA / OLA Policies
- 3rd Party Integration

Virtual Desktop Diagnostics and Monitoring:

AVAP for Virtual Desktops brings powerful diagnostics and rich monitoring and diagnostics solutions for virtual desktop environments.

- Virtual Server Monitoring
- Virtual Machine Life-cycle Management

SO WHAT'S BLOCK-CHAIN?

A blockchain is a distributed database, which makes the creation of a digital ledger of transactions and shares it among a distributed network of computers possible. It uses cryptography to allow each participant on the network to manipulate the ledger in a secure way without the need for a central authority. It maintains a continuously-growing list of records (blocks), each containing a timestamp and a link to the previous one.
Some platforms are built and available on a blockchain and are accessible as a DApp (Distributed Application). The main reason for using blockchain technology in the development of these platforms is to provide a decentralized infrastructure that is stable and secure for all the involving parties.

The main advantages of solutions built on blockchain technologies are:

Trustless exchange:
Two parties are able to make an exchange without the oversight or intermediation of a third party, strongly reducing, or even eliminating, counterparty risk.

Empowered users:
Users are in control of all their information and transactions.

Durability, reliability, and longevity:
Thanks to the decentralized networks, blockchain does not have a central point of failure and is better able to withstand malicious attacks.

Transparency and immutability:
Changes to public blockchain are viewable by all parties creating transparency, and all transactions are immutable, meaning they cannot be altered or deleted.

How Block-chain Works

Blockchain can be comprehended as Distributed Ledger technology which was originally devised to support the Bitcoin cryptocurrency. But, after heavy criticism and rejection, the technology was revised for use in things more productive.
To give a clear picture, imagine a spread-sheet that's practically augmented tons to times across a plethora of computing systems. And then imagine that these networks are designed to update this spreadsheet from time to time. This is exactly what blockchain is.

Information that's stored on a blockchain is a shared sheet whose data is recon-ciled from time to time. It's a practical way that speaks of many obvious bene-fits. To begin with, the blockchain data doesn't exist in one single place. This means that everything stored in there is open for public view and verification. Further, there isn't any centralized infor-mation storing platform which hackers can corrupt. It's practically accessed over a million computing systems side-by-side, and its data can be consult-ed by any individual with an internet connection.

DURABILITY AND AUTHENTICITY OF BLOCKCHAIN

Blockchain technology is something that minims the internet space. It's chic robust in nature. Similar to offering data to the general public through the World Wide Web, blocks of authentic information are stored on blockchain platform which is identically visible on all networks.
Vital to note, blockchain cannot be controlled by a single people, entity or identity, and has no one point of failure. Just like the internet has proven itself as a durable space since last 30 years, blockchain too will serve as an authentic, reliable global stage for business transaction as it continues to develop.

TRANSPARENCY AND INCORRUPTIBLE NATURE

Veterans of the industry claim that blockchain lives in a state of consciousness. It practically checks on itself every now and then. It's similar to a self-auditing technology where its network reconciles every transaction, known as a block, which happens aboard at regular intervals.
This gives birth to two major properties of blockchain - it's highly transparent, and at the same time, it cannot be corrupted. Each and every transaction that takes place on this server is embedded within the network, hence, making the entire thing very much visible all the time to the public. Furthermore, to edit or omit information on blockchain asks for a humongous amount of efforts and a strong computing power. Amid this, frauds can be easily identified. Hence, it's termed incorruptible.

WHY WE CHOSE MAKING USE OF BLOCKCHAIN DECENTRALIZATION FOR PINGCHAIN

A lot of people know blockchain as an innovative technology introduced together with its first use case – Bitcoin, a decentralized peer-to-peer cryptocurrency. However, blockchain technology has since also been used for business and organizational purposes, either with a cryptocurrency of its own as a public blockchain or without one as a private blockchain. While aspects of the technology are seen as something that could be useful for such purposes, there are some concerns as to why a business would want decentralization at all, leading some to, incorrectly, dismiss blockchain technology as a hyped-up trend and nothing more.

Below are a few business benefits attributed to decentralization with blockchain:

Security: Since records are distributed across multiple areas and are updated as each block is created, there is always a high level of availability of the data. So, even if a large number of nodes fail or are shut down by an attack, the data is still available for people to access. In addition, since the system is regularly updated with the latest block, accessing any of the active nodes means acquiring the latest data, even in the event of a DDoS attack – a highly-desirable trait for network security.

Distributed Processing: In addition to being able to access the latest block from an active node, the system can also continue to process additional data and add more blocks into the blockchain. So, not only is the data accessible, the system can continue operating as long as there are active nodes in the system. Thus, if an attacker wants to shut down the system to halt processing, they would need to shut down every node on the blockchain, making it even more restrictive to achieve.

Partnerships and Consortiums: While partnerships and consortiums are usually created with the best intentions and with all of the necessary legal agreements in an attempt to protect all parties involved, there still lingers the concern of trust, especially in cases when the parties involved are in competition in other areas. Because of the decentralized nature of blockchain, the issue is significantly mitigated as trust is not needed in terms of processing data as well as storing it. Verifying that one has the same information that another party has is relatively easy to do without the need for additional trust among the parties involved.

These are just a few of the benefits businesses can have when using blockchain technology due to its decentralized structure. With the increasing number of businesses looking into solutions that blockchain can provide, we're sure to find even more benefits of decentralization in the near future.

BENEFITS THAT CAN BE OBTAINED FROM USING PINGCHAIN

For a small business, web-based applications are a big boon in terms of providing the much-needed advantage of speed, convenience and cost savings. This convenience also brings about the need for application monitoring; especially for businesses where a large part of the work and transactions are carried out online through web applications.

Web applications function in an ever-changing, dynamic environment. As new applications evolve and move ahead, businesses need to ensure that safety of data, stored and accessed online, is not compromised. Because threats usually outnumber the safety barriers that can be put up, regular and consistent monitoring of applications can be of immense help in containing system break-downs.

CUSTOMER SATISFACTION

At Pingchain, we understand the concept of "the higher your uptime, the better your deliverables and ultimately, happier your clients and customers". With this, we conduct a regular performance monitoring across all applications, which can prove helpful across several functionalities like:

- Identifying threats: As you adopt newer technologies and online applications, your risk to threats increases. Regular monitoring can help point out red flags immediately, thus allowing you to take preventive action, before system breakdown occurs.

- Improved performance: Deploying Pingchain helps applications to perform consistently well, without compromising on integrity. Monitoring can help you catch probable risks from external threats, put up adequate defences and nab performance issues on time, thus helping boost performance of your web application.

- Enhanced visibility of problems: Consistent and regular monitoring can help you map your applications better. Issues and problems can be resolved without compromising on data security and end-user experience.

CUSTOMER SATISFACTION

Each of these functionalities are closely tied-in with your user experience. How easy is your website to navigate? Does it have features that make navigation difficult in terms of locating areas of interest? Are key features immediately accessible or is there a wait time involved where, for example, a visitor needs to click a functionality and wait for it to load before viewing/listening?

Several factors influence end-user experience, and that are tied in to application monitoring. Most of these are performance related and can be improved or consistently monitored for glitches:

- Page loading time: Visitors can quickly lose interest if your page loading time is high.

- Response time: Anything more than immediate responses can put off a visitor; unless your website is adding enough value. In such cases, visitors can tolerate waiting time of two to three seconds as well.

- Uptime: If your website is not exhibiting 100% uptime, it can put off a visitor experiencing problems, even if for the first time. Depending on your competitors' efforts, any downtime can cause visitors and customers to shift loyalties.

CUSTOMER SATISFACTION

As a thorough and end-to-end application monitoring system, Pingchain can help web applications run smoothly. Our system can work without active human intervention, while ensuring that your applications are covered for performance monitoring. Efficient monitoring will free up your IT staff and professionals to carry out other work related to deliverables, instead of engaging in troubleshooting and manual monitoring.

In a nutshell, the benefits that you can derive from using Pingchain include:

- Reliable and Secure Platform
- Decentralized Network
- Fail Proof Monitoring
- Worldwide Nodes Available

08 Roadmap

2018

May: Pre-ICO
Offering first 10 %
(price is set by market demand)

June: ICO
Start official crowdsale

July: Token Distribution
Tokens on issued to wallets and start of exchange trading

August: Early Access Program
First partners are invited to use the network

October: Global Service
Deploying nodes in Asia, America & Europe

December: Public Release
Opening service to the public

2019

Market Cap Growth
Growing and investing in infrastructure and team

Expanding Network
Establishing more nodes and users

Corporate Partners
Establishing new partners with uptime consulting services

New products
Developing new products to scale up faster by using already existing network, community and cooperations

Conclusion

Computer systems do not always operate how they are expected. There are many reasons why this could happen. When someone has a website, it is important that many computers around the world are able to connect to it with ease. All of these should be able to load the website at one time. Pingchain is here to assist you by enabling a close monitoring and testing of your website function. With our decentralized solution, you can be rest assured of the maximum security of your application performance monitoring, as the results truly define the WYSIWYG acronym (What You See Is What You Get), thereby informing you of the true nature of your application for proper enhancement strategies to be employed.

Investors from following countries that can not attend the ico:

Afghanistan,Albania,Algeria,Andorra,Angola,Antigua and Barbuda,Argentina,Armenia,Australia,Austria,Azerbaijan,Bahamas,Bahrain,Bangladesh,Barbados,Belarus,Belgium,Benin,Bhutan,Bolivia,Bosnia and Herzegovina,Botswana,Brazil,Brunei,Bulgaria,Burkina Faso,Burundi,Cabo Verde,Cambodia,Cameroon,Canada,Central African Republic (CAR),Chad,Chile,China,Colombia,Comoros,Democratic Republic of the Congo,Republic of the Congo,Costa Rica,Cote d'Ivoire,Croatia,Cuba,Cyprus,Czech Republic,Denmark,Djibouti,Dominica,Dominican Republic,Ecuador,Egypt,El Salvador,Equatorial Guinea,Eritrea,Estonia,Ethiopia,Fiji,Finland,France,Gabon,Gambia,Georgia,Germany,Ghana,Greece,Grenada,Guatemala,Guinea,Guinea-Bissau,Guyana,Haiti,Honduras,Hungary,Iceland,India,Indonesia,Iran,Iraq,Ireland,Israel,Italy,Jamaica,Japan,Jordan,Kazakhstan,Kenya,Kiribati,Kosovo,Kuwait,Kyrgyzstan,Laos,Latvia,Lebanon,Lesotho,Liberia,Libya,Liechtenstein,Lithuania,Luxembourg,Macedonia (FYROM),Madagascar,Malawi,Malaysia,Maldives,Mali,Malta,Marshall Islands,Mauritania,Mauritius,Mexico,Micronesia,Moldova,Monaco,Mongolia,Montenegro,Morocco,Mozambique,Myanmar (Burma),Namibia,Nauru,Nepal,Netherlands,New Zealand,Nicaragua,Niger,Nigeria,North Korea,Norway,Oman,Pakistan,Palau,Palestine,Panama,Papua New Guinea,Paraguay,Peru,Philippines,Poland,Portugal,Qatar,Romania,Russia,Rwanda,Saint Kitts and Nevis,Saint Lucia,Saint Vincent and the Grenadines,Samoa,San Marino,Sao Tome and Principe,Saudi Arabia,Senegal,Serbia,Seychelles,Sierra Leone,Singapore,Slovakia,Slovenia,Solomon Islands,Somalia,South Africa,South Korea,South Sudan,Spain,Sri Lanka,Sudan,Suriname,Swaziland,Sweden,Switzerland,Syria,Taiwan,Tajikistan,Tanzania,Thailand,Timor-Leste,Togo,Tonga,Trinidad and Tobago,Tunisia,Turkey,Turkmenistan,Tuvalu,Uganda,Ukraine,United Arab Emirates (UAE),United Kingdom (UK),United States of America (USA),Uruguay,Uzbekistan,Vanuatu,Vatican City (Holy See),Venezuela,Vietnam,Yemen,Zambia,Zimbabwe

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