



Competitive Analysis

**An in depth look at the Vagon Decentralized Cloud and Market Competitors
The decentralized cloud providing Collective Intelligence for Web3**

Author: Sean Michael Brehm
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Executive Leadership

"Data lakes and DLDBs are the foundation for any digital transformation, providing the architecture and tools needed to manage large datasets, reduce costs, and improve cyber security."

- David Smith, Executive Vice President, Microsoft Azure

"The promise of a decentralized cloud computing platform using distributed ledger technology and a decentralized virtual machine is a revolutionary one – one that will revolutionize the way we interact with data and the cloud, enabling us to reduce costs and increase security and privacy."

- Santosh Gopinathan, CTO of Oracle Application Express.

"Let's redefine the Cloud to a place where Collective Intelligence is the new standard and massive data breaches are in the distant past"

- Sai Vennam, the Global Head of Cloud and AI at IBM.

Table of Contents

- 4. 3 Technology Challenges
- 4. Collective Intelligence
- 5. CrowdPoint's Big Idea:
- 6. An Elegant and Artisanal Approach
- 7. VDC: Helping Companies Perform Better
- 8. VDC: Competitive Analysis
- 12. VDC vs. Blockchain Decentralized Clouds
- 20. Vagon Value Units and **crwdunits**
- 15. Summary Conclusion

3 Technology Challenges

The three significant technology challenges facing companies today are: **managing data**, lowering the costs of **digital transformation**, and avoiding data breaches through efficient deployment of **cybersecurity**.

- When it comes to **data**, companies don't know what they don't know and what questions to ask.
- When it comes to **digital transformation**, companies are plagued with complexity which limits a clear vision and an executable plan.
- In **cyber security**, too many companies settle for compliance rather than an efficient defense in depth.

This document provides a competitive analysis of CrowdPoint's Vagon Decentralized Cloud approach with current Blockchain-based strategies and the centralized clouds deployed by companies like IBM's SoftLayer, Microsoft's Azure, and Amazon Web Services.

Today, only a few companies and their technologies are positioned to provide a technology platform to offer solutions to these three globally accepted issues. CrowdPoint's Vagon Decentralized Cloud Technology is uniquely positioned to compete more effectively against the current deployments of decentralized and centralized clouds.

The reader will understand how CrowdPoint's Vagon Decentralized Cloud and its Distributed Ledger Database (DLDB) address these technology challenges facing companies today by comparing costs, security, usability, flexibility, reliability, speed, energy, and support metrics versus centralized cloud providers and current decentralized approaches.

Collective Intelligence

CrowdPoint is building a decentralized cloud using Vagon technology that will enable Collective Intelligence. Collective Intelligence is the driving force of Web 3. It creates more efficient forms of innovation than individual information. It allows multiple people to brainstorm ideas and develop a better solution than anyone could have come up with. Instead of relying on just one person's ideas and knowledge.

Collective Intelligence allows for the expertise and ideas of many people to be combined to create an even better solution. It's like when you have a group project at school – working together, everyone can come up with a better project than any one individual could have. Collective Intelligence is an essential component of Web 3, allowing people to combine their skills and knowledge to solve problems and create reliable, secure technologies. It also enables content creators to monetize their work without relying on centralized platforms, allowing for a more robust content sharing capability.



CrowdPoint's Big Idea: A Decentralized Cloud Purpose Built For Collective Intelligence.

At CrowdPoint, we are a decentralized cloud and technology platform provider. Our Vagon Decentralized Cloud Technology (VDC) is uniquely positioned to provide collective Intelligence. VDC allows data to be distributed across multiple nodes instead of relying on a single centralized server.

A decentralized ledger database and a blockchain are different as one is a database and the other stores hashes. Both operated in decentralized in a secure manner without the need for a central authority. However, there are some key differences between the two.

A decentralized ledger database is not a blockchain because it is a database that stores JSON files across a network of computers or nodes in a distributed document store, each of which has a copy of the data. These nodes communicate with each other to reach consensus on the state of the network, and transactions can be added and but never or removed from the ledger based on a predetermined set of rules.

A blockchain, on the other hand, is a specific type of distributed ledger of hashes that uses cryptographic techniques to create an immutable and transparent ledger of transactions that can refer to a traditional database.

In summary, a decentralized ledger database stores distributed JSON files and a blockchain store hashes that can point to external data in a distributed and secure decentralized ledger.

- According to IBM, a decentralized ledger database is "a transactional database that operates on a peer-to-peer network of nodes, rather than a centralized server" and it "offers cryptographically secure, tamper-evident transactions and transparent access to the transaction history."

(<https://www.ibm.com/topics/decentralized-ledger-database>)

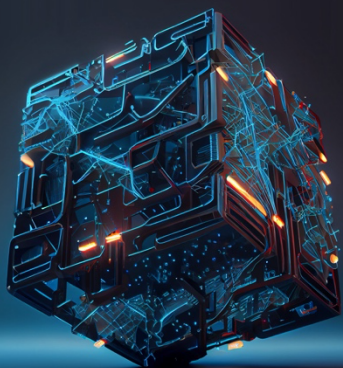
- The Linux Foundation defines blockchain as "a shared, immutable ledger that records transactions and tracks assets in a network." It uses cryptographic techniques to create secure and transparent transactions.

(<https://www.linuxfoundation.org/resources/blockchain/>)

- In a blog post, Microsoft explains that "blockchain is a type of distributed ledger, but not all distributed ledgers are blockchains." They note that while both use distributed nodes to come to consensus on the state of the network, the key difference is in the cryptographic techniques used to secure transactions.

(<https://azure.microsoft.com/en-us/blog/blockchain-vs-distributed-ledger-technologies/>)

- Coin Central describes a decentralized ledger database as "a distributed (or decentralized) system where multiple computers maintain and update the same database" and notes that it can be used for a variety of purposes, including financial transactions. (<https://coincentral.com/decentralized-ledger-database/>)



- In their book "Blockchain Basics," authors Daniel Drescher notes that "a blockchain is essentially a distributed ledger with a focus on secure and tamper-proof transactions" while a decentralized ledger database "is frequently used in situations where data may be exchanged and updated frequently and rapidly, whereas a blockchain is more suitable in situations where transactional data is exchanged less frequently and greater security and transparency are important." (<https://www.apress.com/gp/book/9781484226032>)

This distributed ledger data database (DLDB) technology allows for faster processing speeds, better security, and more efficient use of resources. Furthermore, the decentralized nature of the cloud aids in digital transformation as it allows multiple entities to access, collaborate, and manage the data simultaneously, enabling the development of Collective Intelligence. Collective Intelligence is a powerful tool for helping global businesses with **data management**, **digital transformation**, and **cyber security**:

- Collective intelligence helps companies with **data management** by leveraging the combined knowledge and experience of a group of people to identify and analyze data sets faster and more accurately. It allows companies to gain insight into customer behavior, market trends, and operational performance by combining data sources, identifying correlations, and making better-informed decisions. By leveraging collective intelligence, companies can make data-driven decisions that are more accurate and efficient.
- Collective intelligence can help companies with **digital transformation** by providing a platform for them to collaborate, share ideas and insights, and make informed decisions that consider the combined knowledge of the entire organization. It can also enable companies to tap into the collective wisdom of external stakeholders and partners, allowing them to take advantage of their expertise and experience. Furthermore, collective intelligence can help companies identify and quickly resolve potential challenges related to digital transformation, resulting in a smoother transition and faster time to market.
- Collective intelligence can help companies with **cyber security** by providing real-time information from multiple sources, such as other companies, cyber security experts, and the open-source community. This information can help companies stay ahead of the latest cyber security threats and take preventive measures, such as patching vulnerabilities, deploying antivirus software, and training employees to recognize suspicious activity. Building a Collective intelligence platform on a decentralized cloud with a DLDB is more secure than traditional cloud solutions today.
- A DLDB (Distributed Ledger Database) on an embedded Virtual Machine on the VDC provides secure, tamper-proof, and immutable transaction records. VDC ensures the integrity of data stored in the cloud by using cryptographic methods to sign and encrypt transactions. Only authorized users have access to the sensitive data stored in the cloud. VDC allows for distributed consensus protocols to be used to ensure that all transactions are consistent across the network. This ensures that data stored in the cloud is verified and accurate, providing greater security and trust in the cloud.
- The demand for decentralized cloud solutions has been growing in recent years, as more individuals and organizations seek to take advantage of the benefits of distributed computing and data management. Additionally, the use of JSON document stores as a format for storing data has become increasingly popular in software development, as it provides a flexible and scalable solution for managing structured data.
- According to a report by Market Research Future, the global decentralized cloud market is expected to reach a value of USD 9.67 billion by 2025, growing at a compound annual growth rate (CAGR) of 22.3% over the forecast period of 2019-2025. The growth of the decentralized cloud market is being driven by factors such as the increasing demand for secure and scalable cloud services, the call for more enterprise class friendly evolution of blockchain technology, and the growing adoption of decentralized applications.

An Elegant and Artisanal Approach

Our elegant and artisanal approach has been made possible because instead of rushing to market in the high tide of ICOs mean that our Company took the time and effort to create something special with care and attention to detail.

We built our solution keeping the Human Identity as our North Star with care and using our teams special background and development techniques and the materials available to use to make the Vagon Decentralized Cloud look and feel unique.

As a result, our VDC embedded multiple technologically advanced approaches to achieve Collective Intelligence, including a Distributed Ledger Database (DLDB), Deterministic Concurrence, Kademlia, BLS-17, and a dedicated polyglot Virtual Machine.



VDC's combination of technologies will be used as a reference for creating new technology in the future. It is that disruptive. Using the Vagon Decentralized Cloud powered by its virtual machine technology is like having a super-fast, secure online vault under your control. It uses technologies like deterministic concurrency and BLS-17 to ensure that no one can access your data without your permission. It's like having a super-secure vault that you can access anywhere in the world. With a decentralized cloud, you can keep your data safe and secure without worrying about anyone else accessing it.

DLDB: The Decentralized Ledger Database (DLDB) will keep track of all your data and run your applications and help your business partners and customers run theirs, meaning everyone will know exactly where everything is. Plus, you don't have to worry about huge companies controlling your data since it's all stored in a distributed network. Plus, it's faster and more efficient than traditional cloud computing, so you can get stuff done faster.

Deterministic concurrency: This technology is a way of making sure that all the computers in a decentralized cloud architecture work together in harmony. It's like having a team working together on a project, but each person has their own part and must do it in a specific order. This way, everyone's work is done consistently without hiccups or problems. It's desirable because it ensures that all the computers in a decentralized cloud architecture always work together in the same way, making the whole system more efficient and reliable.

VDC uses a consensus group in its block graph approach. A consensus group is an assembly of participating nodes responsible for verifying, validating, and storing the data of the DLDB network. This group of nodes is responsible for ensuring the integrity and accuracy of the data stored on the VDC. They use a consensus algorithm to agree on the validity of each transaction or data before it is added to the DLDB.

Kademlia: Kademlia is a distributed hash table (DHT) based peer-to-peer (P2P) protocol designed to facilitate the storage and retrieval of data in a distributed network. Kademlia uses a distributed hash table (DHT) to store data on a distributed ledger. This allows for high availability, scalability, and the ability to store and access data no matter the size of the network. This system of decentralized consensus ensures that the ledger is immutable and tamper-proof. The data stored on the ledger is cryptographically secure, so it can't be altered or deleted.

Distributed Ledger Database (DLDB): This is an embedded database that stores data in JSON-like documents with dynamic schemas. This means that documents can have different structures, and that fields can vary from document to document.

This makes it easier to represent hierarchical relationships and complex structures than in a traditional relational database. The DLDB also supports replication and sharding, which allows for the distribution of data across multiple servers. This ensures that data is always available, even if one server fails.

In addition, the DLDB has built-in data access control, which allows for secure access to the database. This feature helps to protect sensitive data from unauthorized access. is distributed based on an improved version of today's distributed ledger technology (DLT).

It is a shared, immutable, and cryptographically secured distributed document store database managed by a network of computers rather than a single centralized authority. DLDBs use consensus algorithms to ensure that all participants agree about the data's current state.

DLDBs leverage deterministic concurrency and BLS-17 to ensure that data is accessible and consistent across all participants in the network. Concurrency control allows for multiple users' simultaneous access and update of data. At the same time, BLS-17 is a cryptographic signature scheme that enables secure and authenticated communication between nodes in the network. Together, these technologies provide a safe and reliable way to manage data across a distributed network.

The Vogon Decentralized Cloud includes a high-performance virtual machine that can run programs written in different languages, such as Java, JavaScript, Ruby, and Python. It is designed to make it easier for developers to write programs that combine different languages and run faster than traditional programs. In short, its VM makes it easier for developers to write programs that can run faster and more efficiently on any platform.

The VM leverages its Microservice to provide an easy-to-use, secure, and cost-effective platform for developing and deploying microservices.

It enables developers to build cloud-native applications faster and more efficiently while delivering superior performance and scalability.

It provides a unified development experience with support for multiple languages.

Also, it provides a secure runtime environment with built-in security and performance monitoring tools.



VDC: Helping Companies Perform Better.

The Essentially the Vagon Decentralize Cloud helps to solve three of the biggest challenges companies face using technology today:

Managing Data

Data is the new oil, and information is the fuel that powers our global economy. Companies must effectively manage and use their data to drive insights and inform decisions. This includes data storage, security, governance, and analytics capabilities and the need to properly integrate data sources and formats.

The Vagon Decentralized Cloud is purpose-built to help manage data by utilizing decentralized, distributed documents and cryptographically secure technology. This technology can help to securely store and validate data, provide immutability and data integrity, enable secure sharing, and offer real-time visibility. The decentralized nature of the ledger allows for greater control and privacy. At the same time, the virtual machine provides a secure environment for the execution of smart contracts and other applications. With this technology, organizations can ensure that data is stored securely while tracking and managing its use in real time.

Digital Transformation

The need for digital transformation is increasing to stay competitive in the market and meet customer needs. Managing data and surfacing information on time is hard. Deciding on how to promptly identify, provision, and effectively deploy the right technologies is complex and, too often, very expensive. Companies must continually evaluate and update their technology solutions, processes, and systems to maximize productivity and profitability.

The Vagon Decentralized Cloud helps with digital transformation issues by providing a secure, transparent, and immutable platform for data exchange. By utilizing distributed ledger technology, organizations can create a shared database that is both secure and auditable, ensuring that all parties involved in a transaction have a verifiable record of the trade and its associated data. This provides a more secure and efficient way to exchange data between organizations and can be used to create digital contracts, digital currencies, and other digital assets.

Additionally, the embedded virtual machine enables organizations to develop, deploy, and execute smart contracts and other distributed applications, automating and streamlining complex processes while ensuring data security and transparency.

Cyber Security

With the growing complexity of digital infrastructures, companies across the globe face an increased risk of cyber-attacks and associated data breaches. Cybersecurity breaches can have costly implications for businesses, including financial losses, regulatory penalties, and reputational damage.

The Vagon Decentralized Cloud will help solve cyber security issues by providing secure and immutable data records stored on the blockchain. Through the virtual machine, users can create smart contracts that are automatically executed when certain conditions are met, reducing the risk of fraud and malicious activity. Additionally, the distributed ledger technology ensures that all data stored on the blockchain is secure and tamper-proof, making it difficult for hackers to access sensitive data. Finally, the distributed nature of the blockchain helps ensure that any changes to the data stored on the ledger are immediately visible to all participants, allowing for quick identification and remediation of any cyber security threats.

VDC: Competitive Analysis

	Vagon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Cost	7.5	7.0	7.0	6.5	5.0
Security	9.5	9.0	8.5	7.0	8.0
Performance	9.0	9.0	8.0	8.0	8.5
Flexibility	9.2	8.5	7.0	8.0	8.4
Reliability	9.0	9.0	7.5	8.5	8.4
Support	8.5	9.0	8.0	8.0	7.5
Speed	9.6	9.5	8.3	8.3	7.5
Energy	8.5	9.0	8.4	8.0	7.6

1. Cost

Compared to a centralized cloud, VDC, including the cost to set up the infrastructure, the monthly fees for hosting, and any additional fees for extra services, is less. A Distributed Ledger Database (DLDB) with an embedded polyglot Virtual Machine (VM) is cost-effective compared to a centralized cloud provider because it eliminates the need for a centralized server, storage, and infrastructure.

VDC reduces the need for expensive server infrastructure, resulting in lower costs for both hardware and software. VDC reduces the need for expensive server infrastructure because it collapses and eliminates several kinds of software.

Each software technology requires many separate computers or servers to compute, query, and store data. Instead, the data is stored on a distributed ledger, essentially a shared distributed document store database accessible through a simple query.

This means multiple computers or devices can access the same data without duplicating, saving money and resources. Additionally, the embedded polyglot VM allows users to run code in different languages so that the data can be more easily shared and accessed.

Centralized Cloud: CrowdPoint rate the cost of a centralized cloud a 7 out of 10. It can be cost-effective but there are also many factors to consider such as the size and complexity of the cloud, the number of users, and the types of services being provided.

Hybrid Cloud: Scoring for this depends on factors such as the services and resources required, the provider chosen, and the specific setup of the hybrid cloud in question. The cost of a hybrid cloud can range from around \$1,000 to \$100,000 per month, so we would score it from 6 to 8, settling on 7.0 to providing equidistant room depending on the specifics.

Multi Cloud: Much like a Hybrid Cloud, scoring for the Multi Cloud depends on factors such as the services and resources required, the provider chosen, and the specific setup of the hybrid cloud in question. The cost of a hybrid cloud can range from around \$100 to \$100,000 per month, so we would score it from 6 to 8, settling on 6.5 because of the challenge managing the complexity of working across multiple cloud platforms. This includes dealing with different cloud-specific tools and services, managing different security models, and ensuring compatibility between various cloud providers. Additionally, there are often costs associated with data transfer between cloud providers, and there may also be challenges related to portability and scalability.

Edge Cloud: Much like a Hybrid Cloud, scoring for the Multi Cloud depends on factors such as the services and resources required, the provider chosen, and the specific setup of the hybrid cloud in question. The cost of a hybrid cloud can range from around \$100 to \$100,000 per month, so we would score it from 5 to 7, settling on 5.0 because of the challenge of scalability. Edge cloud systems must be able to quickly and cost-effectively scale up or down to meet demand, while still providing reliable and secure services. Additionally, edge clouds require a robust network infrastructure to ensure data can be quickly transferred between the cloud, edge devices, and users.

2. Security:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Security	9.5	9.0	8.5	7.0	8.0

Centralized cloud systems typically rely on the provider to manage the system's security. This means that the provider is responsible for implementing and maintaining security measures, such as encryption and authentication, and monitoring the system for threats. The provider is also responsible for ensuring that only authorized users can access the system and its data.

On the other hand, VDC is distributed among multiple nodes, and each node is responsible for the security of its own data. This means that each node has its own security measures, such as encryption and authentication and monitoring for threats.

Additionally, users of decentralized cloud systems have more control over the security of their data, as they can choose which nodes to trust and which to avoid.

Traditionally, centralized cloud systems have been more secure than current decentralized cloud systems due to the higher level of security control that the provider has over the system. However, VDC offers more control and flexibility over the security of the data because it is embedded within a DLDB, making it a preferred option for users looking for a higher level of protection. Additionally, its use of Deterministic concurrency means that when multiple people access the same DLDB, the database and the codebook associated with the compaction encryption will determine who gets access and who can make changes. This helps improve security because it makes it harder for someone to change the database without permission. It also makes it impossible to accidentally overwrite someone else's changes because a new record reflecting the change is reflected.

VDC provides enhanced security due to its distributed storage, decentralized consensus mechanisms, and BLS-17 technology. This protects data from single-point-of-failure attacks, resulting in reduced security costs. VDC provides enhanced security because the data is stored across multiple computers instead of just one, so if one computer is hacked or fails, the data is still safe. The decentralized consensus mechanisms ensure that the data stored on each computer is the same, so if someone tries to tamper with it, everyone else will know.

This means that the data can be trusted and is much more secure than if it was stored on one computer. It uses BLS-17, a type of encryption technology used by its DLDBs to keep the data stored securely, making it difficult for unauthorized users to access or tamper with it.

Simply put, BLS-17 works like a digital lock requiring a unique key only authorized users can access. This prevents anyone who needs the key from getting into the database and changing the data. So, it helps to keep data safe and secure.

Centralized Cloud: CrowdPoint rate the security of centralized cloud should score 8 or higher. Factors such as the encryption used, the complexity of the authentication system, the type of data stored, and the security protocols in place will all factor into the overall security score. CrowdPoint is awarding a 9 out of 10. There are many factors to consider such as the size and complexity of the cloud, the number of users, and the types of services being provided

Hybrid Cloud: It depends on the security measures taken by the hybrid cloud provider. Generally, the security of a hybrid cloud should be at least 8 out of 10, CrowdPoint is awarding an 8. because the biggest security challenge for a hybrid cloud is the potential for a malicious actor to gain access to data stored in the cloud, either through a vulnerability in the cloud infrastructure or by exploiting the connection between the on-premises and cloud environment.

Multi Cloud: A well-configured multi cloud environment with strong security measures in place could achieve a score of 8 to 10, while a poorly configured environment with weak security measures would likely score 1 to 3. CrowdPoint is awarding a 7.0

Edge Cloud: Scoring security of edge cloud depends on several factors, such as the type of cloud provider, the specific security controls in place, and the type of data being stored and processed. However, in general, a good edge cloud security system should include encryption, authentication, access control, data segmentation, logging and monitoring, and compliance with relevant standards and regulations. Based on this, CrowdPoint is awarding a score of 8.0 to indicate a secure edge cloud system.

3. Performance:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Performance	9.0	9.0	8.0	8.0	8.5

VDC has an embedded DLDB technology that improves performance due to its distributed storage and decentralized consensus mechanisms. It offers increased performance using a document-oriented data model, indexing, and sharding. The document-oriented data model allows the DLDB to store and access data using documents and collections instead of traditional rows and columns. Indexing enables the DLDB to quickly access data without scanning the entire database. Sharding helps the DLDB distribute data and scale performance by partitioning the data across multiple servers. Additionally, the DLDB leverages VDC's built-in VM for caching and memory management capabilities that help it improve performance. This increases throughput and reduces latency, resulting in improved performance at a lower cost.

On VDC, the data is distributed across multiple nodes, eliminating the need for a single server. Additionally, since the data is stored and processed across various nodes, the cost of storing and processing it is split across nodes, making it cheaper than using a centralized cloud provider. Additionally, since the data is stored on a distributed ledger, it is more secure and tamper-proof than a centralized cloud provider.

VDC uses automated provisioning tools to enable users to provision resources quickly and automatically. This will reduce manual labor and increase efficiency.

VDC leverages network optimization tools to optimize the network for both cost and performance. This helps to improve the speed and reliability of the network.

Load Balancing: VDC has embedded load balancing algorithms using deterministic consensus and sharding to distribute workloads across multiple nodes. This helps to improve performance and avoid bottlenecks.

Scalability: VDC's inherent distributed computing capability allows it to scale its resources up or down as needed. This helps to ensure that the cloud can meet the demands of its users.

Security: VDC leverages its compaction and encryption and other security measures to protect its data. This helps to ensure that only authorized users can access the data.

Monitoring and Alerts: Like any other cloud provider VDC leverages monitoring tools to track performance and alert users when there is an issue. This helps to ensure that any potential problems are quickly identified and resolved.

Disaster Recovery: VDC, through its consensus groups has a level of backup and disaster recovery embedded however the company implements back up plans to ensure that data is not lost in the event of a disaster. This helps to ensure that the cloud remains available even in the event of a catastrophic event.

Centralized Cloud: CrowdPoint rate the performance of a well-managed and properly configured centralized cloud should have a score of 9.0. There are many factors to consider such as the size and complexity of the cloud, the number of users, and the types of services being provided

Hybrid Cloud: The exact score to the performance of a hybrid cloud is challenging, as performance can vary depending on the specific configuration and other factors. However, I CrowdPoint gives a hybrid cloud score range of 8 to 10. CrowdPoint is awarding it an 8.0 to be conservative on the assumptions of scalability of the public cloud with the security and control of the private cloud.

Multi Cloud: It difficult accurately score the performance of a multi cloud on a scale of 1 to 10 as performance will vary depending on the specific cloud services used, the configuration settings, and the workloads being run. CrowdPoint is awarding an 8.0 based on providing simple Relational Database, Kubernetes and standard server configuration with top end processors and memory.

Edge Cloud: It is difficult to score the performance of edge cloud on a scale of 1 to 10 as its performance will depend on the specific application and infrastructure being used. However, the best attribute of an edge cloud that justifies a high-performance score is its ability to provide low latency and high throughput computing resources close to the user. Edge clouds can reduce latency by bringing cloud services closer to the user, allowing them to access data and services faster. Additionally, edge clouds enable organizations to deploy many resources in a distributed manner, leading to higher throughput and better performance. In general, CrowdPoint will award a value of 8.5 if their security system include encryption, authentication, access control, data segmentation,

4. Flexibility:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Flexibility	9.2	8.5	7.0	8.0	8.4

VDC is like having different parts that can be connected and customized to fit your needs. You can add or remove components as you need to make sure the system works perfectly for you. It's like having many different tools you can mix and match to create a machine that does exactly what you need it to do.

VDC has an embedded, high-performance, polyglot virtual machine. It enables developers to write applications in multiple languages and run them in the same runtime environment. This flexibility allows developers to easily create applications on numerous platforms and interact with data stored in different databases.

VDC's embedded VM provides enhanced performance and scalability, allowing developers to quickly develop and deploy applications. It supports many languages, including Java, JavaScript, Python, Ruby, and C/C++. Its polyglot nature will enable developers to write code in one language and execute it in another, eliminating language barriers and simplifying development.

In addition, its embedded VM also provides superior security by isolating applications and data within a secure environment. This ensures that data is protected from being accessed by unauthorized users. Furthermore, the VDC VM can handle high data traffic levels without compromising performance.

With these features, VDC, with its own VM and DLDB, is a superior choice for flexibility compared to a central cloud with a database installed. By using VDC with its embedded VM and DLDB, developers can take advantage of its flexibility, scalability, and enhanced security. This makes it an excellent choice for developing secure, distributed applications.

Centralized cloud: A centralized cloud is like having one giant machine that does everything you need. It's like having one extensive toolbox with all the tools you need, but you can't mix and match them to do different things. You can't customize it as much as a decentralized cloud, but it can be easier to use and manage. Because of this flexibility it adds complexity in choice CrowdPoint is awarding it an 8.5

Hybrid Cloud: The biggest flexibility challenge of a hybrid cloud is the complexity of managing and maintaining multiple cloud environments. Hybrid clouds require organizations to manage and reconcile two distinct cloud infrastructures and ensure that data is securely and reliably flowing between them. This can be a time-consuming and complex process, as organizations must consider potential compatibility issues, security protocols, and other operational considerations when managing hybrid cloud deployments. CrowdPoint would score it from 6 to 8, settling on 7.0 to providing equidistant room depending on the specifics.

Multi Cloud: It depends on the specific multi-cloud platform, but in general CrowdPoint believes a score of 8 out of 10 for flexibility. Multi-cloud solutions are designed to be highly flexible and provide users with the ability to customize their cloud services with the options that best suit their needs. CrowdPoint awards it an 8.0. This is because the biggest flexibility challenge of a multi-cloud environment is managing and maintaining multiple cloud environments. Organizations must account for multiple infrastructure architectures, cloud vendors, and different configurations, and must ensure that resources are properly allocated and optimized across the various clouds. Additionally, organizations must be able to move workloads quickly and easily between the various cloud environments, while ensuring that data, applications, and services remain secure and compliant.

Edge Cloud: The biggest flexibility challenge of an edge cloud is finding a way to distribute data efficiently and securely between edge nodes, cloud nodes, and users. This can be difficult to achieve due to the complexities of different network infrastructures and the need to keep the data secure while ensuring adequate bandwidth and latency requirements are met. Additionally, it can be difficult to scale the edge cloud to meet fluctuating user demand and to keep up with the ever-changing technology landscape. CrowdPoint is awarding and 8.4

5. Reliability:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Reliability	9.0	9.0	7.5	8.5	8.4

VDC with DLDB powered by own VM Highly reliable due to its distributed nature, with no single point of failure. No single node can cause the entire system to crash, providing a reliable and resilient system. VDC's VM is a high-performance, open-source virtual machine, and runtime environment for running applications written in multiple languages. It is designed to provide stable, consistent performance across various languages, making it a reliable option for powering DLDBs.

VDCs Backup and Redundancy Measures are world class facilitating automatic replication and sharding of data across the network ensure that data is always backed up and accessible, even in the event of a node failure.

Centralized Cloud: Reliability is dependent on the quality and uptime of the hosting provider, as well as the reliability of the hardware and software used. Centralized clouds are generally dependable, if the hosting provider is reliable, and the hardware and software are up to date. Most hosting providers offer backup and redundancy measures, such as data replication across multiple servers, to ensure data is always accessible. The biggest reliability challenge of a centralized cloud is ensuring uptime and availability in the face of system failures or outages. As a centralized cloud is maintained by a single provider, it is vulnerable to disruptions in service due to hardware or software issues, or even natural disasters. As such, it is important to have redundancy measures in place in case of any system failure or outage. CrowdPoint awards 9.0

Hybrid Cloud: The biggest reliability challenge of a hybrid cloud is managing the data and applications across multiple cloud environments. This requires complex coordination between the on-premises and cloud-based infrastructure, as well as ensuring that the data is properly synchronized and secure. Additionally, hybrid cloud environments can have higher latency, bandwidth issues, and other performance issues that can lead to reliability issues. CrowdPoint would score it from 6 to 8, settling on 7.5 depending on the specifics.

Multi Cloud: The biggest reliability challenge of a multi-cloud is ensuring that the different clouds are compatible, and that data can be synchronized across multiple cloud services. It is also important to ensure that each cloud service is secure and reliable, and that data is backed up and protected from potential threats. Additionally, managing multiple cloud services can be complex, requiring careful planning and monitoring to ensure the reliability of all services. CrowdPoint is awarding and 8.5

Edge Cloud: The biggest reliability challenge of an edge cloud is ensuring high availability and low latency of services and applications located at the edge. This requires an efficient, redundant network architecture with sufficient bandwidth and a reliable network connection to ensure that services and applications are always accessible and responsive. Additionally, the edge cloud needs to be able to handle spikes in traffic and scale quickly and efficiently. Finally, the edge cloud needs to be secure and protected from malicious attacks. CrowdPoint is awarding and 8.4

6. Support:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Support	8.5	9.0	8.0	8.0	7.5

Customer support for centralized cloud platforms is typically provided by the cloud provider, meaning all inquiries and issues are directed to a single source. This centralized approach can be beneficial in speed, as the provider can dedicate a team of staff to resolving customer queries and providing immediate support. Response times are typically fast, depending on the severity of the issue and the number of resources dedicated to fixing it.

In comparison, customer support for decentralized cloud platforms is more distributed as there is no single source of support. The benefit of decentralized customer support on a decentralized cloud is that it provides a more secure and resilient system with faster response times. Since the customer support is distributed across multiple nodes, the system is less vulnerable to single-point-of-failure and is less likely to experience downtime.

Additionally, since customer support is spread across numerous nodes, response times are significantly reduced since there are multiple contact points for customer support.

Techniques to ensure response times in VDC are faster than a centralized cloud include:

- Deploying dynamic customer support teams that can quickly respond to customer issues.
- Implementing automated customer support systems that can quickly respond to common customer queries.
- Utilizing real-time analytics to quickly identify customer issues and determine the best way to address them.

Additionally, utilizing customer feedback and surveys to measure customer satisfaction and identify areas for improvement can help ensure that response times are faster than in a centralized cloud.

Centralized Cloud: The biggest support challenge of a centralized cloud is ensuring that all users and systems remain in sync and that all changes are tracked and implemented correctly. This requires a great deal of coordination and oversight, which can be difficult to manage. Additionally, there are security risks associated with a centralized cloud, as it can be a single point of failure for a company's data and applications. Finally, there is a need for robust and reliable backup systems in place to protect against data loss in the event of a system failure. CrowdPoint is awarding 9.0 because of access to funds.

Hybrid Cloud: The biggest support challenge of a hybrid cloud is managing the complexity of the different environments and ensuring that all components work together in harmony. This requires deep technical knowledge and a high level of expertise in both the public and private clouds. Additionally, ensuring that the security, performance, and scalability of the hybrid cloud are all optimized can be a difficult task. Because of the variability CrowdPoint awards 8.0

Multi Cloud: The biggest support challenge of an edge cloud is providing adequate coverage and support to all locations. Edge clouds are often deployed in geographically distributed locations, which can make providing consistent and reliable support difficult. Additionally, edge clouds may require specialized hardware, software, and technical expertise, making it difficult to find qualified personnel to provide support. CrowdPoint is awarding and 8.0

Edge Cloud: The biggest support challenge of an edge cloud is providing adequate coverage and support to all locations. Edge clouds are often deployed in geographically distributed locations, which can make providing consistent and reliable support difficult. Additionally, edge clouds may require specialized hardware, software, and technical expertise, making it difficult to find qualified personnel to provide support. CrowdPoint is awarding and 7.5

7. Speed:

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Speed	9.6	9.5	8.3	8.3	7.5

Centralized cloud computing is the traditional model of cloud computing, where all the computing resources are managed and provided by a single provider. Decentralized cloud computing is a newer model with distributed power across multiple providers. Each provider is responsible for managing the resources they provide.

Centralized cloud computing offers increased speed and reliability because a single provider manages and monitors all the resources. This provider can ensure that the resources are up to date and running efficiently, resulting in faster access to applications and data. Additionally, centralized cloud computing allows for more efficient collaboration, as all the resources are managed and available in one place.

Decentralized cloud computing can also offer increased speed and reliability, but with the added benefit of being more resilient and secure. Since the resources are distributed across multiple providers, it is more difficult for malicious actors to access the system. Additionally, each provider is responsible for their help, meaning that outages and other issues can be addressed by the provider, resulting in faster response times.

In terms of speed, centralized cloud computing is generally faster than decentralized cloud computing due to the increased efficiency of the centralized model. However, decentralized cloud computing can provide increased security, resilience, and quicker response times, making it a viable option for organizations looking for more secure solutions. Additionally, using VDC's embedded VM to run a distributed ledger database helps to improve speed and performance. VDC's VM is a high-performance virtual machine that can compile and execute Java code faster than a traditional JVM. It is optimized for distributed ledger databases. This means that transactions on the ledger can be processed more quickly and efficiently, resulting in improved speed and performance.

Centralized Cloud: The biggest speed challenge of a centralized cloud is latency, which is the time it takes for data and information to travel from the cloud to its users. This can be impacted by the distance between the user and the cloud, as well as the number of connected users at any given time. As the cloud grows and more users access it, the latency can increase, resulting in slower speeds. CrowdPoint is awarding 9.0 because of access to large budgets.

Hybrid Cloud: The biggest speed challenge of a hybrid cloud is ensuring that data and applications move quickly between the on-premises and cloud environments. This requires good network connectivity between the two environments, as well as reliable and secure access to data stored in the cloud. Additionally, hybrid cloud architectures can be complex, making it difficult to troubleshoot performance issues or identify bottlenecks. Because of the variability CrowdPoint awards 8.3

Multi Cloud: The biggest speed challenge of a multi-cloud environment is the latency of data and application accessibility. When data and applications are spread across multiple cloud providers, the data must be transferred from one provider to another, which can cause latency issues. Additionally, ensuring consistent performance across cloud providers can be difficult due to the differences in their underlying infrastructure and services. CrowdPoint is awarding and 8.3

Edge Cloud: The biggest speed challenge of an edge cloud is latency. Edge clouds require data to travel over long distances and this can cause significant latency issues. As the distance between the edge cloud and the user increases, the latency can become too high for the application to be usable. This can be especially problematic for applications that require real-time responses or for applications that require high data throughput. CrowdPoint is awarding and 7.5

8. Energy

	Vogon Decentralized Cloud	Centralized Clouds	Hybrid	Multi Clouds	Edge Clouds
Energy	8.5	9.0	8.4	8.0	7.6

Centralized cloud computing uses a single server with a single access point to store and process data. This allows for the efficient use of resources, as the server can access the data quickly and without interruption. The centralized cloud also offers a security problem, as all data is stored in a single location and can be more easily monitored. It can, in theory, be more secure; however, given that cybercrime is the trillions, it has proven to be no more secure than any other solution today.

- a. Can be more expensive than other options (e.g., DLDBs or polyglot virtual machines) in the long run.
- b. Less flexible than other options (e.g., DLDBs or polyglot virtual machines), as applications are limited to the cloud provider's infrastructure.
- c. Not as secure as other options (e.g., DLDBs), as data is stored on a single server and is vulnerable to breaches.

On the other hand, VDC uses multiple servers located in different physical locations and a distributed network of computers. This allows for more flexibility and scalability than a centralized cloud, as different resources can be added or removed as needed. However, it also requires more energy consumption, as multiple servers need to be maintained and powered.

Additionally, the distributed nature of the network can make it more difficult to monitor, and security can be more challenging to maintain.

VDC doesn't require a GPU. It can run on a standard "pizza box" server. VDC uses its own efficient virtual machine, and deterministic concurrency ensures that the system does not need to constantly check for conflicts. VDC leverages embedded VM, and deterministic concurrency and BLS 17 require less energy because these technologies reduce the amount of computation necessary to maintain the ledger. BLS 17 reduces the number of cryptographic operations required to verify transactions on the ledger. These technologies combined result in a more efficient and less energy-intensive ledger. The components of VDC working in unison make it more efficient than a centralized cloud.

Polyglot Virtual Machine:

Advantages:

- Allows applications to be written in multiple languages, making it easier for developers to use their language of choice.
- Virtual machines are highly portable, so applications can be moved from one environment to another.
- Can be scaled up or down quickly and easily, making it a good choice for applications that can handle large amounts of data or traffic.

Distributed Ledger Database (DLDB):

- Highly secure, as data is stored and replicated across multiple nodes in the network.
- Transactions are cryptographically secured and immutable, making it difficult for anyone to tamper with the data.
- Can achieve consensus across multiple nodes in the network quickly, making it an ideal choice for time-sensitive operations.
- Decentralized structure makes it more resilient to outages and data breaches.
- Traditionally, a DLDB requires a complex setup, and complicated maintenance can be complicated for some users. However, VDC leverages its embedded VM to reduce the setup and maintenance complexity. Automated processes manage the database, such as automatically creating and maintaining backups at the block level through cellular mitoses like replication and synchronization of nodes, with access control rules. This embedded automation is used to set up and maintain the database by automating everyday tasks, such as database administration and monitoring.

Centralized Cloud: The biggest energy challenge of a centralized cloud is the amount of energy it requires to maintain and operate. Centralized clouds require large amounts of energy to power the servers and cooling systems that are necessary for their operation. Additionally, the centralized cloud infrastructure is often spread across multiple locations, leading to inefficiencies in power usage. As a result, many cloud providers are increasingly investing in renewable energy sources to reduce their carbon footprint and improve energy efficiency. CrowdPoint is awarding 9.0 because of access to large budgets to fund renewable energy strategies.

Hybrid Cloud: The biggest energy challenge of a hybrid cloud is ensuring that the computing and storage resources are used efficiently and efficiently managed to maximize performance while minimizing energy consumption. This requires careful planning and management of the resources, as well as scheduling of tasks to ensure optimal use of the resources. Additionally, monitoring energy consumption and usage to identify areas of improvement is critical. CrowdPoint awards 8.4

Multi Cloud: The biggest energy challenge of a hybrid cloud is ensuring that the computing and storage resources are used efficiently and efficiently managed to maximize performance while minimizing energy consumption. This requires careful planning and management of the resources, as well as scheduling of tasks to ensure optimal use of the resources. Additionally, monitoring energy consumption and usage to identify areas of improvement is critical. Managing this complexity is hard CrowdPoint is awarding and 8.0

Edge Cloud: The biggest energy challenge of an edge cloud is the need to balance the energy consumption of the cloud and its applications with the available energy sources. Edge clouds require a significant amount of energy to function and maintain their performance, but the energy sources available in each location may be limited. As a result, edge clouds must be optimized for energy efficiency to ensure that the energy required for their operations does not exceed the available energy sources. Additionally, edge clouds must be designed to utilize renewable energy sources when available. CrowdPoint is awarding and 7.5

VDC VS Blockchain Decentralized Clouds

A decentralized cloud should be like a big online storage space where people can store their data and access it to run their lives and business. It should be secure so that nobody can access your information unless you provide permission. The cloud should be reliable so that it's always available when you need it, private so that only you can see it, and public when you need it to be. It must be able to grow and shrink depending on how many people are using it and able to work with different types of apps and services.

DLT nor Blockchain technology have yet to be ready to be used as a decentralized cloud because they still need to be faster to handle the vast amount of data transferred between multiple computers. Also, it is too expensive to maintain and would require a lot of energy to run. Current DLT technology is too costly to maintain due to its high cost of hardware and software resources and the need for specialized personnel and expertise to manage the network. DLT relies on consensus mechanisms such as proof-of-work or proof-of-stake, which require large amounts of computing power and energy to secure the network and verify transactions. This leads to high operational costs, which can be challenging to maintain in the long run.

Integrating with relational databases is a flawed approach because a database is designed to store data in a centralized way, making it easier for hackers to access the data. Also, if the database is not secured correctly, it can be vulnerable to attacks.

Lastly, DLT technology needs to be more secure to protect data from being hacked or stolen because it relies on a decentralized system, which means no one entity is in control. This makes it challenging to track who has access to the data and is making changes. Also, detecting and protecting the rest of the network can be difficult if one part of the network is compromised.

In summary here are the reasons why a DLT nor blockchain are not efficient enough to be a decentralized cloud:

1. **Lack of Data Consistency:** Without the data replication and distributed lock mechanisms of a distributed ledger database, it would be difficult to ensure data consistency across multiple participants in a decentralized cloud.
2. **Poor Security:** Without a distributed ledger database, the security of the decentralized cloud would be poor since there is no distributed consensus or cryptographic encryption involved. Blockchains lack robust security measures to protect all data stored and shared on the network. Here are 5 of the most common flaws and attacks associated with current Blockchains:
 - **51% Attack:** This attack allows a malicious actor to control more than 50% of the network's computing power and thus, allows them to alter the blockchain ledger as they please. This attack is difficult to pull off, but it is not impossible.
 - **Double Spending:** This attack involves the malicious actor sending the same crypto coins multiple times and thus, increasing the balance of their own wallet.

- Sybil Attack: This attack involves the malicious actor creating multiple identities on the blockchain and using them to manipulate the network.
 - Replay Attack: This attack involves the malicious actor replaying a previously successful transaction and thus, increasing their own wallet balance.
 - Race Attack: This attack involves the malicious actor attempting to outrun other transactions by having their own transactions confirmed first. This can be done by using multiple computers and networks to send out the same transaction.
3. Low Availability: Without the replication of data across multiple nodes, it would be difficult to maintain high availability and resilience in a decentralized cloud.
 4. Slow Performance: Without the distributed consensus of a distributed ledger database, transactions would take longer to process, resulting in slower performance. Blockchain and DLT require significant energy to run and maintain. In contrast, the cloud can be deployed with minimal resources
 5. Reliability: Blockchain and DLT don't allow for the same level of scalability. A decentralized cloud should be reliable and always available so that users can access their data whenever and wherever they need to.
 6. Privacy: A decentralized cloud should be designed to ensure that all data is kept private and secure from outside attackers or malicious actors. Current Blockchains demonstrate:
 - a. Lack of an Anonymous Network: Blockchain technology does not utilize an anonymous network, making it vulnerable to attacks from malicious actors. For example, in 2017, roughly \$150 million worth of Ethereum was stolen due to a lack of anonymity.
 - b. Lack of Data Privacy: When data is stored on a blockchain, it is visible to everyone who has access to the chain. As a result, private data can be easily accessed and exposed, making it difficult to protect user privacy.
 - c. Lack of Privacy Controls: Blockchain technology does not offer any built-in privacy controls, leaving users vulnerable to data breaches and other malicious attacks. This was highlighted in 2018 when the personal information of over 200,000 users of the EtherDelta cryptocurrency exchange was exposed due to a lack of privacy controls.
 - d. Limited Data Retention: Blockchain technology does not have any data retention policy, meaning that data stored on the blockchain is unable to be deleted or modified. This leaves users at risk of data breaches, as the data is permanently stored on the chain.
 7. Scalability: A decentralized cloud should be able to scale up or down depending on the needs of the users, ensuring that everyone can access the data they need. Current Blockchains are limited due to:
 - a. Network Congestion: Blockchains are limited in their scalability because they are running on a single network, meaning there is only so much capacity available for transactions. This can cause network congestion and lead to slow transaction times. For example, the Ethereum network can only process about 15 transactions per second, while Visa can process over 24,000.
 - b. Transaction Costs: Additionally, transaction costs can become a major issue when scaling a blockchain. Because of the limited amount of space on a single blockchain, miners are incentivized to prioritize transactions with higher fees. As the amount of transactions increase, so does the amount of money needed for each transaction.
 - c. Limited Data Storage: One of the biggest limitations of blockchain technology is its limited data storage capabilities.

Most public blockchains only allow for a certain amount of data to be stored in each block, meaning that larger applications or files can't be stored on the blockchain. This can limit the scalability of blockchain solutions.

8. Flexibility: A decentralized cloud should be flexible enough to accommodate different applications and services. Current Blockchains are limited in their flexibility due to:
 - a. Limited Protocols: Blockchain technology is limited by the protocols it operates on, which can be restrictive to certain applications and services. For example, Ethereum is the most popular blockchain protocol and is limited to a specific set of applications and services, while other protocols such as Hyperledger and Corda are better suited to other types of applications.
 - b. Limited Scalability: Blockchains are often limited in their ability to scale due to their decentralized nature. This can be problematic for certain applications and services that require high throughputs or quick transactions.
 - c. Limited Interoperability: Although some blockchains can communicate with each other, many are not. This lack of interoperability can limit the potential of certain services and applications.
 - d. Limited Privacy: In a public blockchain, all transactions are visible to everyone. This can be an issue for certain applications and services that require privacy.
 - e. 5. Limited Flexibility: Blockchains are limited in the way that they can be customized and altered to accommodate different applications and services. This can be a major limitation for certain use cases.



Vogon Value Units and crwdunits

crwdunits are SEC-filed utility tokens that can be used to access the Vogon Decentralized Cloud Services or use a product on the cloud. CrowdPoint's uses what it calls Vogon Value Units as a competitive and efficient pricing strategy because it allows customers to pay using **crwdunits** for the capacity they need based on the number of processors and cores that are used for their workloads. The model allows for flexible pricing, meaning customers can scale their capacity up or down as needed.

Having an SEC-filed utility token means that a company has made sure that its token is legal and legitimate. This makes it easier for people to trust the company and feel secure when they use a **crwdunit**. It also shows that the company has taken the necessary steps to protect its customers, which is essential for all users, regardless of age.

In simple terms, it's like having a certificate of authenticity for a product – it shows that it is safe and genuine.



When you purchase Vogon Value Units with **crwdunits**, it is essentially a swap contract, a type of smart contract that makes it possible to **crwdunits** for Vogon Value Units to power your application, store your data, run analytics, or purchase services on VDC.

As a swap contract, you can exchange your **crwdunits** for the Vogon Value Units you need. In other words, you can use swap contracts to "swap" one type of utility token for another.

The swap contract allows you to trade for the tokens you need without finding someone who wants your tokens.

Owning an SEC-filed utility token will be securitized by silver provides a way for VDC customers to pay for transactions in the cloud without worrying about their money's security.

This means that the purchase will be backed by silver, a valuable and trusted asset, so they know it will stay secure. This means your payments will remain secure and private without the worry of overspending. The tokens are also limited in number, so they can be used to pay for services without becoming too expensive or too common.

crwdunits are not only to pay for transactions on the VDC, but they can also help protect the financial future of their owner. It helps them save money, as silver securitization helps stabilize the token's value and may even increase it over time. The limited number of tokens also means that they can benefit from a kind of scarcity that can help increase their holdings' value. Finally, the futures swap contract helps to protect customers and investors from price volatility, meaning they can buy and sell their tokens with confidence as the value of Vogon Decentralized Services increases in value and price. We have summarized the ten benefits below:

- **Security:** **crwdunit** is a SEC filed utility token securitized by a future silver streaming agreement provides investors with a secure and reliable asset that is backed by a physical commodity. This reduces the risk of holding a digital asset and provides investors with the confidence that their investment is protected.
- **Limited Supply:** **crwdunits** are issued utility tokens in limited amounts, investors have the assurance that the supply of the tokens will not exceed the demand, thereby helping to maintain the value of the tokens over time.
- **Transparency:** By having an SEC filing, investors have access to the company's financial and operational information which helps to create trust in the organization.

- **Decentralized Cloud Transactions:** Using a utility token to pay for decentralized cloud transactions provides an efficient and secure way for businesses to store and share data without having to rely on a single provider.
- **Cost Savings:** By using a utility token to pay for cloud transactions, businesses can save money on transaction fees and eliminate the need for middlemen.
- **Increased Liquidity:** By having an SEC-filed utility token that is securitized by future silver streaming agreements, it provides an additional asset that can be used as a medium of exchange. This increases the liquidity of the token and makes it easier for users to trade it on the open market.
- **Reduced Risk:** By issuing the tokens in limited amounts and using silver as the underlying asset, it reduces the risk of inflation and volatility for both buyers and sellers. The limited number of tokens also prevents individuals from manipulating the price of the token.
- **Increased Transparency:** By having an SEC-filed utility token, it increases transparency in the market. This allows buyers and sellers to be aware of the true value of the token and helps to prevent fraud.
- **Low-Cost Transactions:** By having the tokens used to pay for cloud transactions as a futures swap contract, it reduces the cost of transactions. This allows buyers and sellers to save money and makes it easier for them to access the decentralized cloud services.
- **Improved Security:** By using a future silver streaming agreement as the underlying asset, it increases the security of the token by providing an additional layer of security. This reduces the risk of fraud and helps to protect the token holders.



Summary Conclusion

The Vogon Decentralized Cloud is emerging as a promising competitor. It is rapidly surfacing as a new market leader due to its ability to provide real-time data analytics, secure data storage, and scalability in a more distributed and secure environment than traditional centralized databases. By leveraging its embedded VM's high-performance virtual machine, its DLDB offers improved performance, faster query execution times, and increased scalability.

In addition, its DLDB can handle a wide variety of data types, making them suitable for use in a wide range of business applications. Additionally, VDC's DLDB can provide a secure environment for data storage and analytics, ensuring that data remains secure and protected from tampering or unauthorized access. As a result, the Vogon Decentralized Cloud will be becoming increasingly popular for businesses looking for a competitive edge in their data-driven business strategy.

The Vogon Decentralized Cloud eliminates the need for expensive middleware applications and integration efforts between companies that share its common DLDB. By providing a distributed, secure, and immutable ledger, its VM allows companies to securely access and share data without costly integration efforts. Additionally, its VM's native support for multiple languages, including Java, JavaScript, Python, and Ruby, makes it easier for developers to create and deploy applications on the decentralized cloud. Finally, its VM's low latency and scalability enable companies to access and share data with minimal disruption to their operations.

The inventors of Vogon Decentralized cloud built it to run on its own VM. This reduces the need for middleware applications and costly integration efforts between companies who share a common distributed ledger database (DLDB). This technology is ideal for global midmarket companies as it offers several advantages, including:

1. Lower costs. By reducing the need for middleware applications, companies can save a substantial amount of money on integration efforts and other costly overhead.

2. Increased efficiency. Its DLDB on VM offers improved scalability, speed, and security, allowing companies to move quickly and securely when sharing data and conducting transactions.
3. Greater control. By decentralizing the cloud, companies can retain control over the data they share with other organizations, rather than relying on a centralized provider.
4. Easier access. Its DLDB on VM provides an easy and secure access to the data that is shared between companies, making collaboration smoother and more efficient.
5. Future-proof technology. Its DLDB on VM is designed to be forward-compatible, allowing companies to easily upgrade their systems as new technologies emerge.

Overall, the Vagon Decentralized Cloud offer global midmarket companies the chance to reduce costs, increase efficiency, retain control, achieve smoother access to data, and remain future proof.