



Competitive Edge Technology
The Human Resource Consulting Division
Established 1994

HOLOCHAIN & WEB3 for HR - ANALYSED by
ARTIFICIAL INTELLIGENCE

3.0 NODE OWNERSHIP & SOURCE CHAINS

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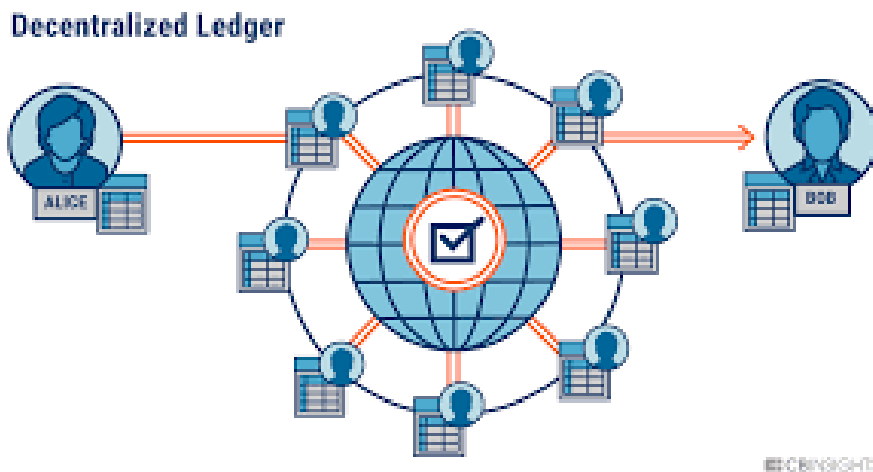
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3.0 NODE OWNERSHIP & SOURCE CHAINS



3.1 Does a Holochain network participants have their own ledger

ChatGPT Response

In a Holochain network, participants do not have their own ledger in the traditional sense. Unlike a blockchain, where a single ledger is replicated across all participating nodes, Holochain utilizes a different approach called "agent-centric" architecture.

In Holochain, each participant maintains their own local source chain, which is a personal and private ledger specific to that individual. The source chain contains the participant's data, transactions, and actions within the network. It acts as a personal journal of their interactions and is stored locally on their device.

When participants interact with each other or exchange data in a Holochain application, they validate and sign the data using their private keys. The data is then shared directly between participants, typically through peer-to-peer connections or distributed hash tables (DHTs). Each participant's local source chain is updated independently and does not require consensus with other participants.

This agent-centric approach in Holochain provides greater autonomy and scalability, as participants have control over their own data and do not rely on a centralized ledger. It enables efficient data sharing and allows for more flexible and diverse application designs.

3.2 Does the owner of a Holochain node pay anything for ownership

ChatGPT Response

As an owner of a Holochain node, there is typically no direct cost associated with ownership itself. However, it's important to consider that running a Holochain node may require certain resources and incur expenses. Here are some factors to consider:

- a) **Hardware and Infrastructure:** Running a Holochain node requires hardware resources, such as a computer or server, to host the node. The specific requirements may vary based on the complexity and scale of the application. You would need to ensure you have adequate computing power, storage capacity, and network connectivity to support the node's operation.
- b) **Internet Connectivity:** Continuous internet connectivity is necessary for your Holochain node to participate in the network. Depending on your internet service provider and data plan, there may be associated costs for maintaining an internet connection.

- c) **Energy Consumption:** Running a node requires electricity to power the hardware and keep it operational. The energy consumption depends on the hardware specifications, usage patterns, and electricity rates in your area. It's important to consider the potential energy costs associated with running the node.
- d) **Maintenance and Upgrades:** Over time, you might need to perform maintenance tasks or upgrade your hardware and software components to ensure optimal performance and stay compatible with the evolving Holochain ecosystem. These maintenance activities might incur costs, depending on the specific requirements.
- e) **Transaction Fees:** While Holochain itself does not enforce transaction fees, applications built on Holochain may incorporate transaction fees as part of their economic models. If you participate in such applications or provide services within the network, you might encounter transaction fees or costs associated with specific interactions.

It's worth noting that the costs mentioned above are not directly associated with the ownership of the Holochain node itself but rather the operational aspects of running and participating in a Holochain network. As the owner, you would be responsible for ensuring the necessary resources and managing any associated expenses to effectively operate your node within the network.

3.3 Is a Holochain wallet the same as a ledger

ChatGPT Response

No, a Holochain wallet is not the same as a ledger. Let me explain the difference between the two:

- a) **Holochain Wallet:** Holochain is a framework for building decentralized applications (dApps). It provides a platform for creating peer-to-peer applications that are built on distributed hash tables (DHTs). In the context of Holochain, a wallet is a software application that allows users to manage their cryptographic keys, interact with dApps, and perform transactions on the Holochain network. It enables users to store, send, and receive digital assets specific to the Holochain ecosystem.
- b) **Ledger:** A ledger, on the other hand, is a physical or digital device designed to securely store cryptographic keys and manage transactions. It is commonly used in the context of blockchain technology, where it serves as a hardware wallet for storing cryptocurrencies. Ledger wallets are highly secure and offer offline storage, protecting the private keys from potential online threats. They typically provide a user interface to interact with various blockchain networks, enabling users to manage their crypto assets securely.

While both a Holochain wallet and a ledger deal with the management of digital assets, they are designed for different purposes and operate within different ecosystems. A Holochain wallet is specific to the Holochain network, while a ledger is a more general-purpose hardware wallet used for various blockchain networks.

3.4 Is a Holochain zome the same as a ledger

ChatGPT Response

No, a Holochain zome is not the same as a ledger. Let me clarify the difference between the two:

- a) **Holochain Zome:** In the context of Holochain, a zome (short for "zone of mutual effect") is a fundamental building block for creating decentralized applications (dApps). It is a modular and independent piece of code that represents a specific functionality within a Holochain application. Each zome defines its own data structures, validation rules, business logic, and interactions with other zomes. Zomes are designed to be reusable and composable, allowing developers to create complex applications by combining and interconnecting different zomes.

- b) **Ledger:** A ledger, in the context of blockchain technology, refers to a decentralized and distributed database that maintains a record of all transactions and data associated with a particular blockchain network. It is essentially a digital ledger that securely records and stores information in a sequential and tamper-resistant manner. Ledgers are a core component of blockchain networks and play a crucial role in ensuring transparency, immutability, and consensus among network participants.

While both a Holochain zone and a ledger are components used in decentralized systems, they serve different purposes. A Holochain zone represents a modular piece of code within a Holochain application, defining its functionality and interactions, while a ledger is a distributed database that maintains the records and transactions of a blockchain network.

3.5 What incentive can a company offer employees to set up a node and connect to the company's Holochain network

ChatGPT Response

A company can offer various incentives to encourage employees to set up a node and connect to the company's Holochain network. These incentives can motivate employees to actively participate and contribute to the network. Here are a few potential incentives:

- a) **Token Rewards:** The company can introduce a token-based reward system where employees earn tokens or digital assets for setting up and maintaining their nodes. These tokens can have value within the network ecosystem, enabling employees to exchange them for goods, services, or additional benefits.
- b) **Ownership Stake:** The company can offer employees an ownership stake in the network or specific applications running on the network. This can be in the form of equity, tokens, or other assets, giving employees a sense of ownership and alignment with the network's success.
- c) **Enhanced Access and Privileges:** Employees who connect their nodes to the company's Holochain network can be granted enhanced access and privileges within the network or specific applications. This can include access to exclusive features, early access to updates or new functionalities, or the ability to participate in decision-making processes within the network.
- d) **Professional Development Opportunities:** By participating in the company's Holochain network, employees can gain valuable experience and knowledge in decentralized technologies. The company can provide training, workshops, or resources to help employees develop their skills and expertise in Holochain and related technologies, which can enhance their professional growth and career prospects.
- e) **Recognition and Reputation:** The company can recognize and reward employees who actively contribute to the network and achieve notable accomplishments within the Holochain ecosystem. This can include public recognition, awards, or reputation-based systems that highlight and appreciate employees' contributions.
- f) **Gamification and Challenges:** Introducing gamification elements and challenges can make the process of setting up and connecting nodes more engaging and enjoyable. The company can create competitions, leaderboards, or achievement-based systems that incentivize employees to participate, collaborate, and achieve specific goals within the network.

It's important to tailor the incentives to the specific context and culture of the company, taking into consideration the objectives of the Holochain network and the motivations of the employees. By offering attractive incentives, the company can foster employee engagement, promote adoption of the network, and create a positive and collaborative environment for decentralized operations.

3.6 What makes a Holochain node autonomous in a network

ChatGPT Response

In a Holochain network, each node is designed to be autonomous, which means it has a certain level of independence and control over its own actions and data. Here are some key aspects that contribute to the autonomy of a Holochain node:

- a) **Local Source Chain:** Each node maintains its own local source chain, which is a personal and private ledger specific to that node. This source chain contains the node's data, transactions, and actions within the network. The node has full control over its own source chain, including the ability to validate and sign its own data without relying on a central authority.
- b) **Validation Rules:** Nodes in a Holochain network define their own validation rules for the data they accept and store. This means that each node can have its own set of validation criteria and rules that determine what data it considers valid. By having this control, nodes can enforce their own trust requirements and manage data integrity within their own domain.
- c) **Peer-to-Peer Interactions:** Holochain operates on a peer-to-peer (P2P) network architecture, where nodes communicate and interact directly with each other. This decentralized communication enables nodes to exchange data, validate transactions, and collaborate without relying on intermediaries or centralized servers. Nodes have the autonomy to establish connections and engage in direct interactions with other nodes in the network.
- d) **Agent-Centric Architecture:** Holochain follows an agent-centric model, where each node is considered an independent agent with its own identity and agency. Nodes have the freedom to define their own behavior, rules, and application logic within the framework of the shared protocols and standards of the Holochain network.
- e) **Data Ownership:** In Holochain, nodes have ownership and control over their own data. They can decide how their data is shared, who can access it, and what permissions are granted. This aspect of data ownership further reinforces the autonomy of nodes in the network.

Overall, the combination of local source chains, validation rules, peer-to-peer interactions, agent-centric architecture, and data ownership empowers each Holochain node with a high degree of autonomy within the network.

3.7 What would be the minimum hardware and computing power for a child node storing a very small dataset on a parent network

ChatGPT Response

The minimum hardware and computing requirements for a child node on a Holochain network depend on the specific needs of the application and the number of transactions that the node needs to process. However, if the dataset is very small and the number of transactions is limited, a low-powered device such as a Raspberry Pi can be sufficient to run a Holochain node.

Here are some general guidelines for the minimum hardware and computing requirements for a child node with a small dataset:

- a) **CPU:** A low-powered CPU, such as a 1 GHz single-core ARM processor, can be sufficient for a child node with a small dataset.
- b) **RAM:** Holochain nodes require a significant amount of memory, but for a small dataset, a minimum of 2 GB of RAM should be sufficient.
- c) **Storage:** A child node with a small dataset may require a minimum of 16 GB of storage.
- d) **Network bandwidth:** The amount of network bandwidth required for a child node with a small dataset is minimal, as the amount of data being transmitted is low. A stable internet connection with a minimum of 1 Mbps bandwidth should be sufficient.

- e) **Operating system:** Holochain runs on various operating systems, including Windows, Mac OS, and Linux. The recommended minimum operating system requirements for running a Holochain node are the same as those of the respective operating system.

It's important to note that these are general guidelines, and the actual hardware and computing requirements may vary depending on the specific needs of your Holochain application and network. It's always a good idea to consult with experienced Holochain developers and review the official Holochain documentation for more detailed information.

3.8 What is a Raspberry Pi

ChatGPT Response

A Raspberry Pi is a small, low-cost computer designed to promote computer science education and experimentation. It was first released in 2012 by the Raspberry Pi Foundation, a UK-based charity organization that aims to teach people of all ages how to program and build computers.

The Raspberry Pi is about the size of a credit card and comes with a range of input/output ports, such as USB, HDMI, and Ethernet, as well as built-in Wi-Fi and Bluetooth connectivity. It runs on a version of the Linux operating system and can be used for a wide range of applications, including home automation, media centers, and robotics.

Due to its low cost and versatility, the Raspberry Pi has become a popular choice for hobbyists and professionals alike for various projects, including running low-power servers, hosting websites, and even as a platform for running Holochain nodes.

3.9 How much does a Raspberry pi cost in Australia and the USA

ChatGPT Response

The cost of a Raspberry Pi can vary depending on the model and the region where it is purchased. Here are the current prices for Raspberry Pi models in Australia and the USA:

In Australia:

- Raspberry Pi 4 Model B (2GB RAM): AUD \$62
- Raspberry Pi 4 Model B (4GB RAM): AUD \$94
- Raspberry Pi 4 Model B (8GB RAM): AUD \$127
- Raspberry Pi Zero WH: AUD \$22

These prices are approximate and may vary depending on the retailer and any applicable taxes or shipping fees.

In the USA:

- Raspberry Pi 4 Model B (2GB RAM): USD \$35
- Raspberry Pi 4 Model B (4GB RAM): USD \$55
- Raspberry Pi 4 Model B (8GB RAM): USD \$75
- Raspberry Pi Zero WH: USD \$15

Again, these prices are approximate and may vary depending on the retailer and any applicable taxes or shipping fees.

3.10 If I wish to download company information held for an employee to the employee's own node can it be done in bulk or must the transfer be done individually and how is the connection achieved

ChatGPT Response

In Holochain, the transfer of company information from a centralized system to an employee's node can be designed and implemented in various ways depending on the specific requirements and application design. Here are a couple of possible approaches:

- a) **Bulk Transfer:** It is possible to design a mechanism for bulk transfer of data from a centralized system to an employee's Holochain node. In this case, you would need to develop a data migration process that extracts the relevant company information for the employee from the centralized system and formats it for import into the Holochain application. This process can be customized to transfer data in batches or in a single bulk transfer, depending on the size and structure of the data.
- b) **Individual Transfers:** Alternatively, you can design the system to perform individual transfers of data for each employee. This approach involves extracting and transferring the relevant data on a per-employee basis. The system would initiate individual data transfers to each employee's Holochain node, ensuring the data is securely delivered to the respective nodes.

Connection between the centralized system and the employee's Holochain node can be established using various integration methods, such as APIs (Application Programming Interfaces) or webhooks. The centralized system can expose APIs or endpoints that allow the Holochain application to retrieve the necessary data. The employee's Holochain node would then make API calls to retrieve and import the data into its local source chain.

Alternatively, the centralized system can send data directly to the employee's Holochain node using secure communication protocols. The Holochain node can listen for incoming data or notifications through specific channels or endpoints. The data transfer can be encrypted and authenticated to ensure security and privacy.

The specific implementation details would depend on the architecture and design choices of the Holochain application, as well as the integration capabilities of the centralized system. Custom development and configuration would be required to establish the connection and enable the transfer of company information to the employee's Holochain node.

3.11 In a Holochain network could the nodes be described as individual blockchains

ChatGPT Response

In a Holochain network, the term "node" refers to an individual participant or device that is running the Holochain application. However, it is not accurate to describe these nodes as individual blockchains. Holochain is a framework for building distributed applications, and it utilizes a different architectural approach compared to traditional blockchain technologies.

In Holochain, each node runs its own separate instance of the application, called a "DNA" (Distributed Network Application). The DNA defines the application's rules, data structures, and validation logic. Nodes communicate with each other through a peer-to-peer network and exchange data in a decentralized manner.

Rather than having a single blockchain that all nodes must agree upon, Holochain uses a distributed hash table (DHT) to store and validate data. Each node maintains its own chain of transactions, called the "source chain," which represents its individual history of actions and interactions. Nodes can validate and verify the actions of other nodes by requesting cryptographic proofs and signatures.

The DHT serves as a distributed storage mechanism where nodes can publish and retrieve data. Nodes can replicate and share data with other nodes based on the application's defined sharing rules. This distributed architecture allows for high scalability and efficiency, as each node only needs to process and store its own data and the data it chooses to replicate.

Therefore, while Holochain utilizes a decentralized and peer-to-peer network of nodes, it does not rely on a single blockchain structure. Instead, it leverages a distributed hash table and individual node chains to achieve its goals of scalability, data integrity, and decentralized application development.

3.12 Can an owner of a Holochain node in one network join other networks

ChatGPT Response

As an owner of a Holochain node, you have the ability to participate in multiple networks by joining them with your node. Holochain is designed to support network interoperability, allowing nodes to connect and interact with different networks as desired. Here's how you can join other networks with your Holochain node:

- a) **Network Configuration:** Each Holochain application operates on its own network with its specific configuration parameters. To join another network, you would need to configure your Holochain node to connect to that particular network. This typically involves providing the necessary network information, such as network ID, network addresses, bootstrap nodes, or network-specific configuration files.
- b) **Network Discovery:** Holochain utilizes techniques like Distributed Hash Tables (DHTs) for network discovery. Your node can use DHT-based discovery mechanisms to find other nodes and networks available for connection. This enables your node to identify and connect to the desired network.
- c) **Peer-to-Peer Connections:** Once your Holochain node has discovered the network and identified potential nodes to connect with, it can establish peer-to-peer connections with those nodes. Through these connections, your node can interact and exchange data with other nodes in the network.
- d) **Application Installation:** To fully participate in another network, you might need to install the specific Holochain application associated with that network. This involves deploying the application code and relevant zones to your node, enabling it to understand and interact with the application-specific data structures and rules within the network.
- e) **Access Control and Permissions:** Depending on the network and application requirements, you might need to obtain appropriate access control permissions or authorization to join and interact with specific networks. This could involve registering your node or obtaining credentials from network administrators or the application developers.

By configuring your Holochain node to connect to other networks, discovering and connecting with peer nodes, installing the relevant applications, and adhering to access control requirements, you can actively participate in multiple Holochain networks simultaneously. This flexibility allows you to engage with different communities, applications, and ecosystems as an owner of a Holochain node.

3.13 Can a Holochain instance be installed on a person's mobile phone

ChatGPT Response

Yes, it is possible to install a Holochain instance on a mobile phone. Holochain is designed to be flexible and can run on various platforms, including mobile devices.

To install a Holochain instance on a mobile phone, you would typically need to follow these general steps:

- a) **Check compatibility:** Ensure that your mobile phone meets the system requirements for running a Holochain instance. This includes factors such as the operating system version and available resources (CPU, memory, storage).
- b) **Obtain the application:** Identify the specific Holochain application or dApp you want to install on your mobile phone. This could be an application developed using the Holochain framework or a specific implementation provided by a project.
- c) **Download and install:** Visit the appropriate app store (e.g., Google Play Store for Android or Apple App Store for iOS) and search for the Holochain application. Download and install the application following the standard process for mobile app installation.
- d) **Configure and run:** Once the application is installed, launch it on your mobile phone. Follow any setup or configuration instructions provided by the application to set up your Holochain instance. This may involve creating an account, configuring network settings, or joining specific networks.
- e) **Interact with the application:** After the Holochain instance is set up on your mobile phone, you can start using the application and interacting with the decentralized network it connects to. This could include creating and interacting with data, participating in peer-to-peer exchanges, or utilizing the functionality provided by the specific Holochain application.

Keep in mind that the availability of Holochain applications for mobile phones may depend on the specific projects and development efforts within the Holochain ecosystem. It's recommended to explore the official website or relevant community channels for the specific application you're interested in to obtain the most up-to-date information and installation instructions.

3.14 Can a Holochain node exist in isolation and not be connected to any network

ChatGPT Response

In theory, a Holochain node can exist in isolation without being connected to any network, but it would limit its functionality and practical use. Holochain is designed as a decentralized, peer-to-peer framework for building distributed applications, and the true value of Holochain emerges when nodes connect and interact with each other.

By connecting to a network, a Holochain node can:

- a) **Participate in Application Logic:** Holochain applications are designed to operate within a network of interconnected nodes. When a node connects to a network, it can engage in the application logic defined by the specific application running on that network. It can share data, execute transactions, and participate in the decentralized application's behavior and processes.
- b) **Share and Exchange Data:** Holochain nodes communicate and share data with each other to achieve data integrity and consensus. By connecting to a network, a node can contribute its data, validate and verify data from other nodes, and collaborate in the distributed data-sharing process. Without network connectivity, a node's ability to exchange and validate data is severely limited.
- c) **Benefit from Network Effects:** Networks built on Holochain thrive on the network effects generated by participants. By connecting to a network, a node can leverage the collective intelligence, collaboration, and contributions of other nodes in the network. It can access shared resources, interact with other participants, and benefit from the collective value created by the network.
- d) **Achieve Consensus and Validation:** Holochain relies on distributed consensus and validation among nodes to ensure data integrity and prevent tampering. By connecting to a network, a node can participate in the consensus process, validate transactions, and contribute to the overall security and trustworthiness of the network.

While it is technically possible for a Holochain node to operate in isolation, its practical utility would be limited. The real power and potential of Holochain emerge when nodes connect, interact, and collaborate

within a network, enabling decentralized applications and leveraging the benefits of decentralized consensus, data sharing, and network effects.

3.15 Can a parent node on a Holochain network invite 1,00+ children nodes to join their network

ChatGPT Response

Yes, a parent node on a Holochain network can invite 1,000+ children nodes to join their network. In Holochain, nodes can join a network by connecting to existing nodes that are already part of the network. This process is commonly referred to as bootstrapping.

To invite 1,000+ nodes to join the network, the parent node would need to provide each child node with the necessary connection details, such as the network address and port number. The child nodes can then use this information to connect to the parent node and join the network.

Holochain is designed to be highly scalable, so it is possible to support large numbers of nodes in a network. However, there are some performance and scalability considerations that you will need to take into account when designing and deploying a large Holochain network, such as optimizing data synchronization and minimizing network congestion.

Overall, it is possible to invite 1,000+ children nodes to join a Holochain network, but it will require careful planning and implementation to ensure that the network is scalable, reliable, and efficient. You may want to consult with experienced Holochain developers or seek out training resources to help you get started.

3.16 Can an individual Holochain app run on a Raspberry Pi node without connection to a network

ChatGPT Response

Yes, it is possible for an individual Holochain app to run on a Raspberry Pi node without a connection to a network.

Holochain is a distributed application platform that allows developers to build decentralized applications that run on a peer-to-peer network. Each Holochain application consists of one or more zones, which are self-contained and independent components that can be run on a single node.

To run a Holochain application on a Raspberry Pi node, you will need to first install the Holochain runtime environment on the device. You can do this by following the instructions provided in the Holochain documentation.

Once the Holochain runtime is installed, you can then install the individual Holochain application on the Raspberry Pi node. This can be done by downloading the application code and using the Holochain command-line interface to build and install the application.

Once the application is installed, it can be run on the Raspberry Pi node without a connection to a network. However, it's important to note that running a Holochain application in isolation may limit its functionality, as the application will not be able to communicate with other nodes on the network.

In summary, while it is possible for an individual Holochain app to run on a Raspberry Pi node without a connection to a network, it may be more practical to run the application on a network to take advantage of the full functionality of the Holochain platform.

3.17 Can I download and install a pre-built Holochain application on a network node

ChatGPT Response

Yes, you can download and install a pre-built Holochain application on a network node.

To do this, you'll need to follow these steps:

- a) Make sure you have a Holochain node installed on your computer. You can download it from the Holochain website.
- b) Find the pre-built Holochain application you want to install. You can usually find this on the developer's website or Github repository.
- c) Download the application files to your computer.
- d) Open the Holochain node terminal and navigate to the directory where you downloaded the application files.
- e) Use the Holochain command-line interface to install the application on your node. The command will vary depending on the application, but it will typically be something like "hc app install path/to/app"
- f) Once the installation is complete, you should be able to use the Holochain node to interact with the application.

Note that some Holochain applications may require additional setup or configuration steps. Make sure to follow any instructions provided by the developer to ensure that the application is installed correctly and functioning properly.

3.18 Could a "create your own source chain" be used as a reason to join a Holochain network

ChatGPT Response

Yes, the ability to create your own source chain can be an appealing reason to join a Holochain network. Holochain offers a unique architecture where each participant in the network has their own individual source chain, which allows for greater autonomy and control over data.

By having your own source chain, you have the freedom to define and manage your own data without relying on a centralized authority or a shared global blockchain. You can create, modify, and interact with data according to the rules defined by the application's DNA (Distributed Network Application), which provides flexibility and customization options.

This individual source chain architecture also offers benefits such as improved scalability and efficiency. Since each participant manages their own data, the burden of processing and storing the entire network's data is distributed among the participants. This can lead to better performance and scalability as the network grows.

Furthermore, having your own source chain empowers you to maintain control over your data and protect your privacy. You can choose what data to share, with whom, and under what conditions. This decentralized approach gives individuals more agency and ownership over their personal information.

In summary, the ability to create and manage your own source chain in a Holochain network can be a compelling reason to join. It offers greater autonomy, customization, scalability, and control over data, which aligns with the principles of decentralization, privacy, and self-sovereignty.

3.19 Does the "chain" in source chain imply the same sequential processing of transactions as blockchains

ChatGPT Response

No, the term "chain" in the context of Holochain's source chain does not necessarily imply the same sequential processing of transactions as in a traditional blockchain.

In a traditional blockchain, transactions are added to the chain in a linear and sequential order. Each block is linked to the previous block, forming a chain of transactions. This sequential nature ensures that the order of transactions is preserved and provides a mechanism for reaching consensus among participants.

In contrast, while the term "chain" is used in Holochain's source chain, it does not necessarily imply the same strict sequential processing. In Holochain, each node has its own individual source chain, which records its actions and interactions within the application. The focus is on the history of actions rather than the strict ordering of transactions.

Holochain allows for parallelism and local autonomy among nodes. Nodes can operate independently, processing their own actions and interactions without needing to wait for global consensus. This parallelism enables higher scalability and efficiency since nodes can process and validate their own data in parallel with other nodes.

However, it is important to note that even though strict sequential processing is not required in Holochain's source chain, the overall consistency and validity of data are ensured through cryptographic techniques and validation rules defined by the application's DNA. Nodes can request cryptographic proofs and signatures from other nodes to verify the integrity and authenticity of the data.

So, while the term "chain" is used in both cases, the nature and purpose of the chain in a Holochain source chain differ from that of a traditional blockchain. Holochain's source chains prioritize individual histories and local autonomy while still ensuring data integrity and security through cryptographic means.