Hyperledger Fabric

Glossary

词汇表

Terminology is important, so that all Hyperledger Fabric users and developers agree on what we mean by each specific term. What is a smart contract for example. The documentation will reference the glossary as needed, but feel free to read the entire thing in one sitting if you like; it's pretty enlightening!

术语很重要，因此所有的 HyperledgeFabric 用户和开发人员都同意我们所说的每个特定术语。例如，什么是智能合约？文档将根据需要引用术语表，但如果您愿意，可以一次阅读整个内容；这非常有启发性！

一、Anchor Peer

一、定位节点

Used by gossip to make sure peers in different organizations know about each other.

被流言蜚语用来确保不同组织的同事互相了解。

When a configuration block that contains an update to the anchor peers is committed, peers reach out to the anchor peers and learn from them about all of the peers known to the anchor peer(s). Once at least one peer from each organization has contacted an anchor peer, the anchor peer learns about every peer in the channel. Since gossip communication is constant, and because peers always ask to be told about the existence of any peer they don't know about, a common view of membership can be established for a channel.

提交包含定位点对等点更新的配置块时，对等点向定位点对等点伸出手，向其学习定位点对等点已知的所有对等点。一旦每个组织中至少有一个对等点联系了锚定对等点，锚定对等点就会了解通道中的每个对等点。因为流言交流是持续的，而且同龄人总是要求被告知他们不知道的任何同龄人的存在，所以可以为一个频道建立一个共同的成员观。

For example, let's assume we have three organizations—A, B, C— in the channel and a single anchor peer—peer0.orgC— defined for organization C. When peer1.orgA (from organization A) contacts peer0.orgC, it will tell it about peer0.orgA. And when at a later time peer1.orgB contacts peer0.orgC, the latter would tell the former about peer0.orgA. From that point forward, organizations A and B would start exchanging membership information directly without any assistance from peer0.orgC.

例如，假设我们在通道中有三个组织——A、B、C——和一个为组织 C 定义的锚点 peer-peer0.orcc。当 peer1.orga（来自组织 A）联系 peer0.orcc 时，它会告诉它 peer0.orga。稍后当 peer1.orgb 联系 peer0.orgc 时，后者会告诉前者 peer0.orga 的情况。从那时起，组织 A 和 B 将开始直接交换成员信息，而无需 Peer0.orcc 的任何帮助。

As communication across organizations depends on gossip in order to work,

there must be at least one anchor peer defined in the channel configuration. It is strongly recommended that every organization provides its own set of anchor peers for high availability and redundancy.

由于跨组织的通信依赖于流言才能工作，因此在通道配置中必须至少定义一个锚定对等。强烈建议每个组织都为高可用性和冗余提供自己的锚定对等点集。

二、ACL

二、ALC

An ACL, or Access Control List, associates access to specific peer resources (such as system chaincode APIs or event services) to a Policy (which specifies how many and what types of organizations or roles are required). The ACL is part of a channel's configuration. It is therefore persisted in the channel's configuration blocks, and can be updated using the standard configuration update mechanism.

一个 ACL 或访问控制列表将对特定对等资源（如系统链码 API 或事件服务）的访问与一个策略相关联（该策略指定需要多少类型的组织或角色）。ACL 是通道配置的一部分。因此，它被保存在通道的配置块中，并且可以使用标准配置更新机制进行更新。

An ACL is formatted as a list of key-value pairs, where the key identifies the resource whose access we wish to control, and the value identifies the channel policy (group) that is allowed to access it. For example lscc/GetDeploymentSpec: /Channel/Application/Readers defines that the access to the life cycle chaincode GetDeploymentSpec API (the resource) is accessible by identities which satisfy the /Channel/Application/Readers policy.

acl 被格式化为键值对的列表，其中键标识要控制其访问权限的资源，值标识允许访问它的通道策略（组）。例如，lscc/getdeploymentspec:/channel/application/readers 定义，满足 /channel/application/readers 策略的标识可以访问生命周期链代码 getdeploymentspec api（资源）。

A set of default ACLs is provided in the configtx.yaml file which is used by configtxgen to build channel configurations. The defaults can be set in the top level "Application" section of configtx.yaml or overridden on a per profile basis in the "Profiles" section.

configtx.yaml 文件中提供了一组默认 ACL，configtxgen 使用该文件构建通道配置。可以在 configtx.yaml 的顶级“应用程序”部分中设置默认值，也可以在“配置文件”部分中基于每个配置文件进行覆盖。

三、Block

三、区块

A block contains an ordered set of transactions. It is cryptographically linked to the preceding block, and in turn it is linked to be subsequent blocks. The first block in such a chain of blocks is called the genesis block. Blocks are created by the ordering system, and validated by peers.

块包含一组有序的事务。它以密码学方式链接到前面的块，然后又链接到后面的块。这

种区块链中的第一个区块称为“创世区块”。块由订购系统创建，并由同行验证。

四、Chain

四、链

The ledger’s chain is a transaction log structured as hash-linked blocks of transactions. Peers receive blocks of transactions from the ordering service, mark the block’s transactions as valid or invalid based on endorsement policies and concurrency violations, and append the block to the hash chain on the peer’s file system.

分类帐链是一个事务日志，其结构为哈希链接的事务块。对等端接收来自订购服务的事务块，根据认可策略和并发冲突将该块的事务标记为有效或无效，并将该块附加到对等端文件系统上的哈希链。

五、Chaincode

五、智能合约

See Smart-Contract.

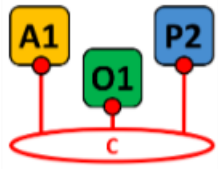
参见智能合约。

六、Channel

六、通道

A channel is a private blockchain overlay which allows for data isolation and confidentiality. A channel-specific ledger is shared across the peers in the channel, and transacting parties must be properly authenticated to a channel in order to interact with it. Channels are defined by a Configuration-Block.

通道是一个私有的区块链覆盖，允许数据隔离和保密。特定于渠道的分类账在渠道中的对等方之间共享，交易方必须通过渠道的适当认证才能与之交互。通道由配置块定义。



Channel C connects application A1, peer P2 and ordering service O1.

七、Commit

七、提交

Each Peer on a channel validates ordered blocks of transactions and then commits (writes/appends) the blocks to its replica of the channel Ledger. Peers also mark each transaction in each block as valid or invalid.

通道上的每个对等端验证事务的有序块，然后将这些块提交（写入/追加）到通道分类账的副本中。对等方还将每个块中的每个事务标记为有效或无效。

八、Concurrency Control Version Check

八、并发控制版本检查

Concurrency Control Version Check is a method of keeping state in sync across peers on a channel. Peers execute transactions in parallel, and before commitment to the ledger, peers check that the data read at execution time has not changed. If the data read for the transaction has changed between execution time and commitment time, then a Concurrency Control Version Check violation has occurred, and the transaction is marked as invalid on the ledger and values are not updated in the state database.

并发控制版本检查是一种在一个通道的对等端之间保持状态同步的方法。对等方并行执行事务，在提交到分类帐之前，对等方检查在执行时读取的数据没有更改。如果事务读取的数据在执行时间和承诺时间之间发生了更改，则会发生并发控制版本检查冲突，并且该事务在分类帐上标记为无效，并且状态数据库中的值不会更新。

九、Configuration Block

九、配置块

Contains the configuration data defining members and policies for a system chain (ordering service) or channel. Any configuration modifications to a channel or overall network (e.g. a member leaving or joining) will result in a new configuration block being appended to the appropriate chain. This block will contain the contents of the genesis block, plus the delta.

包含定义系统链（订购服务）或通道的成员和策略的配置数据。对通道或整个网络的任何配置修改（例如成员离开或加入）都将导致将新的配置块附加到相应的链上。该区块将包含 Genesis 区块的内容，以及 Delta。

十、Consensus

十、共识

A broader term overarching the entire transactional flow, which serves to generate an agreement on the order and to confirm the correctness of the set of transactions constituting a block.

一个更广泛的术语，涵盖整个事务流，用于生成订单协议，并确认构成块的一组事务的正确性。

十一、Consortium

十一、共同体

A consortium is a collection of non-orderer organizations on the blockchain network. These are the organizations that form and join channels and that own

peers. While a blockchain network can have multiple consortia, most blockchain networks have a single consortium. At channel creation time, all organizations added to the channel must be part of a consortium. However, an organization that is not defined in a consortium may be added to an existing channel.

联合体是区块链网络上非订购方组织的集合。这些组织形成并加入渠道，并拥有同龄人。虽然区块链网络可以有多个联合体，但大多数区块链网络都有一个联合体。在通道创建时，添加到通道的所有组织都必须是联合体的一部分。但是，联合体中未定义的组织可以添加到现有渠道中。

十二、Current State

十二、当前状态

See World-State.

见 World-State。

十三、Dynamic Membership

十三、动态成员身份

Hyperledger Fabric supports the addition/removal of members, peers, and ordering service nodes, without compromising the operationality of the overall network. Dynamic membership is critical when business relationships adjust and entities need to be added/removed for various reasons.

Hyperledger 结构支持添加/删除成员、对等点和订购服务节点，而不会影响整个网络的操作性。当业务关系调整并且由于各种原因需要添加/删除实体时，动态成员关系至关重要。

十四、Endorsement

十四、背书

Refers to the process where specific peer nodes execute a chaincode transaction and return a proposal response to the client application. The proposal response includes the chaincode execution response message, results (read set and write set), and events, as well as a signature to serve as proof of the peer’s chaincode execution. Chaincode applications have corresponding endorsement policies, in which the endorsing peers are specified.

指特定对等节点执行链码事务并向客户机应用程序返回建议响应的过程。建议响应包括链码执行响应消息、结果（读集和写集）和事件，以及作为对等方链码执行证明的签名。链码应用程序具有相应的认可策略，其中指定了认可对等方。

十五、Endorsement policy

十五、背书政策

Defines the peer nodes on a channel that must execute transactions attached to a specific chaincode application, and the required combination of responses

(endorsements). A policy could require that a transaction be endorsed by a minimum number of endorsing peers, a minimum percentage of endorsing peers, or by all endorsing peers that are assigned to a specific chaincode application. Policies can be curated based on the application and the desired level of resilience against misbehavior (deliberate or not) by the endorsing peers. A transaction that is submitted must satisfy the endorsement policy before being marked as valid by committing peers. A distinct endorsement policy for install and instantiate transactions is also required.

定义通道上必须执行附加到特定链码应用程序的事务的对等节点，以及所需的响应组合（背书）。一个策略可能要求一个事务由最小数量的认可对等方、最小百分比的认可对等方或分配给特定链码应用程序的所有认可对等方进行认可。政策可以根据应用程序和认可同行对不当行为（故意或不故意）的期望恢复水平来制定。提交的事务在通过提交对等方标记为有效之前必须满足背书策略。还需要安装和实例化事务的独特认可策略。

十六、Hyperledger Fabric CA

十六、Hyperledger Fabric CA

Hyperledger Fabric CA is the default Certificate Authority component, which issues PKI-based certificates to network member organizations and their users. The CA issues one root certificate (rootCert) to each member and one enrollment certificate (ECert) to each authorized user.

Hyperledger Fabric CA 是默认的证书颁发机构组件，它向网络成员组织及其用户颁发基于 PKI 的证书。CA 向每个成员颁发一个根证书（rootcert），向每个授权用户颁发一个注册证书（ecert）。

十七、Genesis Block

十七、创世区块

The configuration block that initializes the ordering service, or serves as the first block on a chain.

初始化订购服务或充当链上第一个块的配置块。

十八、Gossip Protocol

十八、Gossip 协议

The gossip data dissemination protocol performs three functions: 1) manages peer discovery and channel membership; 2) disseminates ledger data across all peers on the channel; 3) syncs ledger state across all peers on the channel. Refer to the Gossip topic for more details.

gossip 数据分发协议执行三个功能：1）管理对等发现和通道成员身份；2）在通道上的所有对等端分发分类帐数据；3）在通道上的所有对等端同步分类帐状态。详情请参阅八卦话题。

十九、Initialize

十九、初始化

A method to initialize a chaincode application.
初始化链码应用程序的方法。

二十、Install

二十、安装

The process of placing a chaincode on a peer’s file system.
在对等文件系统上放置链码的过程。

二十一、Instantiate

二十一、实例化

The process of starting and initializing a chaincode application on a specific channel. After instantiation, peers that have the chaincode installed can accept chaincode invocations.

在特定通道上启动和初始化链码应用程序的过程。在实例化之后，安装了链码的对等机可以接受链码调用。

二十二、Invoke

二十二、调用

Used to call chaincode functions. A client application invokes chaincode by sending a transaction proposal to a peer. The peer will execute the chaincode and return an endorsed proposal response to the client application. The client application will gather enough proposal responses to satisfy an endorsement policy, and will then submit the transaction results for ordering, validation, and commit. The client application may choose not to submit the transaction results. For example if the invoke only queried the ledger, the client application typically would not submit the read-only transaction, unless there is desire to log the read on the ledger for audit purpose. The invoke includes a channel identifier, the chaincode function to invoke, and an array of arguments.

用于调用链码函数。客户机应用程序通过向对等机发送事务建议来调用链码。对等端将执行 chaincode，并向客户机应用程序返回已批准的建议响应。客户机应用程序将收集足够的建议响应以满足认可策略，然后将提交事务结果以进行排序、验证和提交。客户端应用程序可以选择不提交事务结果。例如，如果 invoke 只查询分类账，则客户机应用程序通常不会提交只读事务，除非希望将读取记录在分类账上以便审计。调用包括一个通道标识符、要调用的链码函数和一个参数数组。

二十三、Leading Peer

二十三、领导节点

Each Organization can own multiple peers on each channel that they subscribe

to. One or more of these peers should serve as the leading peer for the channel, in order to communicate with the network ordering service on behalf of the organization. The ordering service delivers blocks to the leading peer(s) on a channel, who then distribute them to other peers within the same organization.

每个组织可以在其订阅的每个通道上拥有多个对等点。为了代表组织与网络订购服务通信，这些对等方中的一个或多个应充当通道的主要对等方。订购服务将块传递给通道上的主要对等端，然后由该对等端将它们分发给同一组织中的其他对等端。

二十四、Ledger

二十四、分类帐

A ledger consists of two distinct, though related, parts - a “blockchain” and the “state database”, also known as “world state”. Unlike other ledgers, blockchains are immutable - that is, once a block has been added to the chain, it cannot be changed. In contrast, the “world state” is a database containing the current value of the set of key-value pairs that have been added, modified or deleted by the set of validated and committed transactions in the blockchain.

分类账由两个不同的部分组成，尽管有关联，即“区块链”和“状态数据库”，也称为“世界状态”。与其他分类账不同，区块链是不可变的——也就是说，一旦区块被添加到链中，它就不能被更改。相反，“世界状态”是一个数据库，其中包含由区块链中已验证和提交的交易集添加、修改或删除的一组键值对的当前值。

It’s helpful to think of there being one logical ledger for each channel in the network. In reality, each peer in a channel maintains its own copy of the ledger - which is kept consistent with every other peer’s copy through a process called consensus. The term Distributed Ledger Technology (DLT) is often associated with this kind of ledger - one that is logically singular, but has many identical copies distributed across a set of network nodes (peers and the ordering service).

考虑到网络中每个通道都有一个逻辑分类账是很有帮助的。实际上，渠道中的每个对等方都维护自己的分类账副本——通过一个称为“共识”的过程保持与其他对等方的副本一致。术语分布式账本技术（DLT）通常与这种账本相关联，这种账本在逻辑上是单一的，但在一组网络节点（对等方和订购服务）上分布着许多相同的副本。

二十五、Member

二十五、成员

See Organization.

参见 Organization。

二十六、Membership Service Provider

二十六、会员服务提供商

The Membership Service Provider (MSP) refers to an abstract component of the system that provides credentials to clients, and peers for them to participate

in a Hyperledger Fabric network. Clients use these credentials to authenticate their transactions, and peers use these credentials to authenticate transaction processing results (endorsements). While strongly connected to the transaction processing components of the systems, this interface aims to have membership services components defined, in such a way that alternate implementations of this can be smoothly plugged in without modifying the core of transaction processing components of the system.

会员服务提供商（MSP）是指系统的一个抽象组件，它向客户和对等方提供凭证，使他们能够参与到一个超级账本结构网络中。客户机使用这些凭据对其事务进行身份验证，对等机使用这些凭据对事务处理结果（认可）进行身份验证。虽然与系统的事务处理组件紧密相连，但此接口的目标是定义成员服务组件，以便在不修改系统的事务处理组件核心的情况下顺利插入此组件的替代实现。

二十七、Membership Services

二十七、会员服务

Membership Services authenticates, authorizes, and manages identities on a permissioned blockchain network. The membership services code that runs in peers and orderers both authenticates and authorizes blockchain operations. It is a PKI-based implementation of the Membership Services Provider (MSP) abstraction.

会员服务在授权的区块链网络上验证、授权和管理身份。在对等方和订购方中运行的会员服务代码对区块链操作进行认证和授权。它是基于 PKI 的成员服务提供者（MSP）抽象的实现。

二十八、Ordering Service

二十八、订购服务

A defined collective of nodes that orders transactions into a block. The ordering service exists independent of the peer processes and orders transactions on a first-come-first-serve basis for all channel’s on the network. The ordering service is designed to support pluggable implementations beyond the out-of-the-box SOLO and Kafka varieties. The ordering service is a common binding for the overall network; it contains the cryptographic identity material tied to each Member.

将事务排序到块中的已定义的节点集合。订购服务独立于对等进程而存在，并且在网络上所有通道的先到先服务基础上订购事务。订购服务旨在支持开箱即用的 Solo 和 Kafka 之外的可插拔实现。订购服务是整个网络的公共绑定;它包含绑定到每个成员的加密标识材料。

二十九、Organization

二十九、组织机构

Also known as “members”, organizations are invited to join the blockchain network by a blockchain service provider. An organization is joined to a network by adding its Membership Service Provider (MSP) to the network. The MSP defines

how other members of the network may verify that signatures (such as those over transactions) were generated by a valid identity, issued by that organization. The particular access rights of identities within an MSP are governed by policies which are also agreed upon when the organization is joined to the network. An organization can be as large as a multi-national corporation or as small as an individual. The transaction endpoint of an organization is a Peer. A collection of organizations form a Consortium. While all of the organizations on a network are members, not every organization will be part of a consortium.

组织也被称为“成员”，由区块链服务提供商邀请加入区块链网络。通过将组织的成员服务提供商（MSP）添加到网络中，可以将组织加入到网络中。MSP 定义了网络的其他成员如何验证签名（如事务上的签名）是由该组织颁发的有效标识生成的。MSP 中身份的特定访问权限受策略控制，这些策略在组织加入网络时也得到了同意。一个组织可以大到跨国公司，也可以小到个人。组织的事务端点是对等端。一组组织组成一个联合体。虽然网络上的所有组织都是成员，但并非每个组织都是联合体的一部分。

三十、Peer

三十、节点

A network entity that maintains a ledger and runs chaincode containers in order to perform read/write operations to the ledger. Peers are owned and maintained by members.

维护分类帐并运行链码容器以便对分类帐执行读/写操作的网络实体。同行由成员拥有和维护。

三十一、Policy

三十一、政策

Policies are expressions composed of properties of digital identities, for example: Org1.Peer OR Org2.Peer. They are used to restrict access to resources on a blockchain network. For instance, they dictate who can read from or write to a channel, or who can use a specific chaincode API via an ACL. Policies may be defined in configtx.yaml prior to bootstrapping an ordering service or creating a channel, or they can be specified when instantiating chaincode on a channel. A default set of policies ship in the sample configtx.yaml which will be appropriate for most networks.

策略是由数字标识的属性组成的表达式，例如：org1.peer 或 org2.peer。它们用于限制对区块链网络上资源的访问。例如，它们规定谁可以读写通道，或者谁可以通过 ACL 使用特定的链码 API。策略可以在引导订购服务或创建通道之前在 configtx.yaml 中定义，也可以在通道上实例化链码时指定。示例 configtx.yaml 中提供了一组适用于大多数网络的默认策略。

三十二、Private Data

三十二、私人数据

Confidential data that is stored in a private database on each authorized peer, logically separate from the channel ledger data. Access to this data is restricted to one or more organizations on a channel via a private data collection definition. Unauthorized organizations will have a hash of the private data on the channel ledger as evidence of the transaction data. Also, for further privacy, hashes of the private data go through the Ordering-Service, not the private data itself, so this keeps private data confidential from Orderer.

存储在每个授权对等机上的私有数据库中的机密数据，在逻辑上与渠道分类账数据分开。通过专用数据收集定义，对该数据的访问仅限于通道上的一个或多个组织。未经授权的组织将拥有通道分类账上的私有数据散列作为交易数据的证据。另外，为了进一步的隐私，私有数据的散列通过订购服务，而不是私有数据本身，因此这会使私有数据对订购者保密。

三十三、Private Data Collection (Collection)

三十三、私人数据收集（收集）

Used to manage confidential data that two or more organizations on a channel want to keep private from other organizations on that channel. The collection definition describes a subset of organizations on a channel entitled to store a set of private data, which by extension implies that only these organizations can transact with the private data.

用于管理一个通道上的两个或多个组织希望对该通道上的其他组织保密的机密数据。收集定义描述了一个有权存储一组私有数据的通道上组织的子集，通过扩展，这意味着只有这些组织才能处理私有数据。

三十四、Proposal

三十四、提议

A request for endorsement that is aimed at specific peers on a channel. Each proposal is either an instantiate or an invoke (read/write) request.

针对某个通道上特定对等点的认可请求。每个建议要么是一个实例化请求，要么是一个调用（读/写）请求。

三十五、Query

三十五、查询

A query is a chaincode invocation which reads the ledger current state but does not write to the ledger. The chaincode function may query certain keys on the ledger, or may query for a set of keys on the ledger. Since queries do not change ledger state, the client application will typically not submit these read-only transactions for ordering, validation, and commit. Although not typical, the client application can choose to submit the read-only transaction for ordering, validation, and commit, for example if the client wants auditable proof on the ledger chain that it had knowledge of specific ledger state at a certain point in time.

查询是一个链码调用，它读取分类帐当前状态，但不写入分类帐。链码功能可以查询分类账上的某些键，也可以查询分类账上的一组键。由于查询不会更改分类帐状态，因此客户机应用程序通常不会提交这些只读事务进行排序、验证和提交。尽管不是典型的，但是客户机应用程序可以选择提交只读事务进行排序、验证和提交，例如，如果客户机希望在分类账链上提供可审核的证据，证明其在某个时间点了解特定分类账状态。

三十六、Software Development Kit (SDK)

三十六、软件开发工具包（SDK）

The Hyperledger Fabric client SDK provides a structured environment of libraries for developers to write and test chaincode applications. The SDK is fully configurable and extensible through a standard interface. Components, including cryptographic algorithms for signatures, logging frameworks and state stores, are easily swapped in and out of the SDK. The SDK provides APIs for transaction processing, membership services, node traversal and event handling.

HyperledgeFabric 客户端 SDK 为开发人员编写和测试链代码应用程序提供了一个结构化的库环境。SDK 是完全可配置的，可以通过标准接口进行扩展。组件，包括用于签名、日志框架和状态存储的加密算法，可以很容易地在 SDK 中进行交换和交换。SDK 提供用于事务处理、成员资格服务、节点遍历和事件处理的 API。

Currently, the two officially supported SDKs are for Node.js and Java, while three more - Python, Go and REST - are not yet official but can still be downloaded and tested.

目前，这两个官方支持的 SDK 是 NoDE.JS 和 Java，而三个以上——Python、Go 和 REST——还不是官方的，但仍然可以下载和测试。

三十七、Smart Contract

三十七、智能合约

A smart contract is code - invoked by a client application external to the blockchain network - that manages access and modifications to a set of key-value pairs in the World State. In Hyperledger Fabric, smart contracts are referred to as chaincode. Smart contract chaincode is installed onto peer nodes and instantiated to one or more channels.

智能合约是由区块链网络外部的客户端应用程序调用的代码，用于管理对世界状态下一组关键值对的访问和修改。在 Hyperledger 结构中，智能合约被称为链码。智能合约链码安装在对等节点上，并实例化为一个或多个通道。

三十八、State Database

三十八、状态数据库

Current state data is stored in a state database for efficient reads and queries from chaincode. Supported databases include levelDB and couchDB.

当前状态数据存储在状态数据库中，以便从链码进行有效的读取和查询。支持的数据库包括 leveldb 和 couchdb。

三十九、System Chain

三十九、系统链

Contains a configuration block defining the network at a system level. The system chain lives within the ordering service, and similar to a channel, has an initial configuration containing information such as: MSP information, policies, and configuration details. Any change to the overall network (e.g. a new org joining or a new ordering node being added) will result in a new configuration block being added to the system chain.

包含在系统级别定义网络的配置块。系统链位于订购服务内，与通道类似，具有包含诸如 MSP 信息、策略和配置详细信息等信息的初始配置。对整个网络的任何更改（例如新的组织加入或添加新的订购节点）都将导致新的配置块添加到系统链中。

The system chain can be thought of as the common binding for a channel or group of channels. For instance, a collection of financial institutions may form a consortium (represented through the system chain), and then proceed to create channels relative to their aligned and varying business agendas.

系统链可以被认为是一个通道或一组通道的公共绑定。例如，一组金融机构可以组成一个联合体（通过系统链代表），然后继续创建与其一致和不同的业务议程相关的渠道。

四十、Transaction

四十、交易

Invoke or instantiate results that are submitted for ordering, validation, and commit. Invokes are requests to read/write data from the ledger. Instantiate is a request to start and initialize a chaincode on a channel. Application clients gather invoke or instantiate responses from endorsing peers and package the results and endorsements into a transaction that is submitted for ordering, validation, and commit.

调用或实例化提交用于排序、验证和提交的结果。调用是从分类帐中读取/写入数据的请求。实例化是启动和初始化通道上的链码的请求。应用程序客户端收集来自认可对等方的调用或实例化响应，并将结果和认可打包到提交用于排序、验证和提交的事务中。

四十一、World State

四十一、世界状态

Also known as the “current state”, the world state is a component of the HyperLedger Fabric Ledger. The world state represents the latest values for all keys included in the chain transaction log. Chaincode executes transaction proposals against world state data because the world state provides direct access to the latest value of these keys rather than having to calculate them by traversing the entire transaction log. The world state will change every time the value of a key changes (for example, when the ownership of a car – the “key” – is transferred from one owner to another – the “value”) or when a new key is added (a car is created). As a result, the world state is critical to a transaction flow, since the current state of a key-value pair must be known

before it can be changed. Peers commit the latest values to the ledger world state for each valid transaction included in a processed block.

也称为“当前状态”，世界状态是“超级账本结构分类账”的一个组成部分。世界状态表示链事务日志中包含的所有键的最新值。chaincode 针对世界状态数据执行事务建议，因为世界状态提供了对这些键的最新值的直接访问，而不必通过遍历整个事务日志来计算它们。每当钥匙的价值发生变化（例如，当一辆车的所有权“钥匙”从一个车主转移到另一个车主时，“价值”）或当一把新钥匙被添加（一辆车被创建）时，世界各国都会发生变化。因此，世界状态对事务流至关重要，因为在更改密钥-值对之前必须知道其当前状态。对等方将处理块中包含的每个有效事务的最新值提交到分类帐世界状态。