Blockchain as a Service

FAQ

FAQ

Common problems

After-sales Support

What information should be gathered and provided when submitting a technical problem via service ticket?

A : In order to analyze and solve the problem for you in a more efficient and effective way, we recommend below template for you to gather information and to provide in the service ticket.

- Your account UID.
- Screenshot or description of the error message or log, and corresponding request ID.
- Name or ID of blockchain related object.
- Steps for reproducing the problem.
- Impact to your business.

Hyperledger Fabric

FAQs

Connecting to BaaS

How can I use a new user after creating it?

A: The organization administrator can use the "Add User" function to register a new user in the Fabric-CA server. After the user has been successfully created, you can perform the enrollment operation using fabric-ca-client or Fabric SDK.

Chaincode management

Why can't I install the uploaded chaincode file?

A: You need to test the chaincode locally and package the chaincode and dependencies into a file, then upload the file through the script tool provided by the BaaS platform or through the peer chaincode package command of the Hyperledger Fabric.

Version support

What is the version of Hyperledger Faric currently supported by BaaS?

A: BaaS currently supports Hyperledger Fabric 1.4.5. For more details of each version, please refer to the release notes.

What is the upgrading strategy of Alibaba Cloud BaaS for the versions of Hyperledger Fabric?

A: Ensuring the stability of the user's business is our basic principle. If the new features of the new version of Hyperledger Fabric have common and significant value, Alibaba Cloud will choose from the first or later patch release under the major version. For example, if the major version is 1.4, and we will choose one of the patch releases from 1.4.1 or later to upgrade. However, in special case, if a majority of users request for a initial release of a major version, we will consider adopting it after careful evaluation and comprehensive testing.

The version upgrade of Hyperledger Fabric by Alibaba Cloud BaaS will make newly created blockchain network adopt the new version by default. However for existing blockchain network with old version, it is up to user to choose a suitable time window to perform the upgrade. And the compatibility of related versions and data is consistent with that of Hyperledger Fabric.

In addition, for consortium with organizations owned by different users or companies, it's recommended that organizations choose a consistent version of Hyperledger Fabric.

Deployment model

How does BaaS achieve high availability deployment for Hyperledger Fabric?

A: BaaS implements high availability deployment of Hyperledger Fabric on the following layers:

- On Container Service Kubernetes layer, the Kubernetes cluster consists of multiple master nodes and multiple worker nodes for high availability. Besides, Pod Anti-Affinity technique is also used to ensure the high availability clustering deployment of Hyperledger Fabric components on Kubernetes.
- On Hyperledger Fabric layer, below configurations are used for high availablity:
    - For each consortium, three orderers are deployed by default, with etcd-raft consensus algorithm.
    - For each peer organization, there are at least two peers are deployed by default, which can be customized.
    - For each organization, clustering deployment (with two nodes) for CA is supported, based on High-availability Editon of Alibaba Cloud RDS database (This CA clustering feature is only for Enterprise Edition and Enterprise Security Edition).
- On application layer, BaaS provides workload balancing with healthcheck (based on Alibaba Cloud SLB) to ensure the high availability of application visiting backend services of Hyperledger Fabric. And BaaS also supports Service Discovery of Hyperledger Fabric, so that applications are able to dynamically connect to available blockchain nodes.

Can BaaS support private cloud deployment?

A: Yes, BaaS supports private cloud deployment, based on three types of platform as below:

- Container Service in Apsara Stack Enterprise.
- Apsara Stack Agility PaaS.
- Container service platform built by users or other vendors based on native Kubernetes technology.

The UI of BaaS for private cloud is shown as below. If you have any requirement, please contact sales team of Alibaba Cloud.
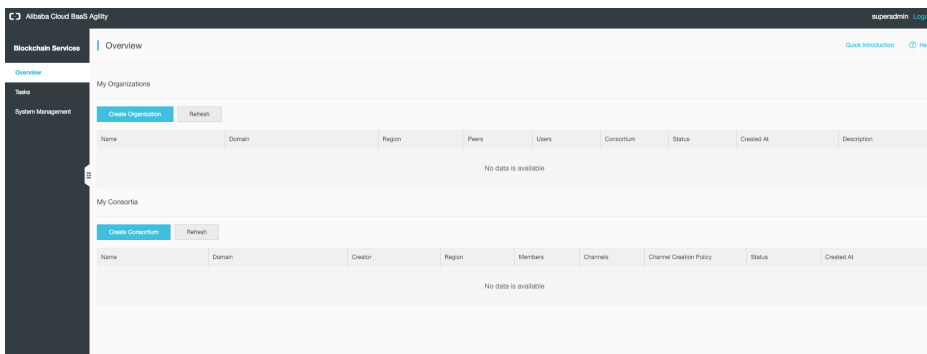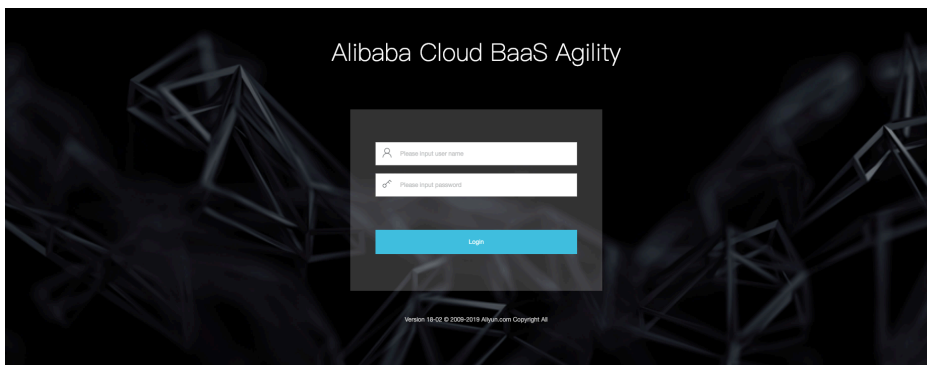
Ant Blockchain

FAQ

Are transactions stored in real time?

A: Unlike traditional transactional databases, transactions are asynchronous in blockchains. Up to 25,000 notary transactions can be made every second.

Is it synchronous with relational databases?

A: It subscribes to block notifications and pulls notifications on demand from the blockchain. Or it uses the business view system.

Are public and private keys legally recognized?

A: The certificate is a legally-recognized certificate that Alipay uses to access a third party.

What method is used to protect data privacy?

A: To protect notary data privacy, data is encrypted and only authorized users can decrypt data.

The client has been initialized successfully but can not comminicate with the blockchain, I also found the error log below, may I ask why is this happening?

```
connect to /123.12.12.123:8080 success!
old is not null, async resend subscribe events
```

A: Usually this happens because of mistakes in the client configurations, please make sure you use the right private key file, password and certificate file.

What can I do if TimeoutException is reported after the client is initialized?

```
 java.util.concurrent.TimeoutException
at
com.alipay.mychain.gl.biz.common.AbstractTransport.sendTwoWayAndSync(AbstractTransport.java:205)
```

A: Obtain information about the blockchain node from the sdk.properties configuration file and run the telnet command to check whether the client properly communicates with the node. Then check whether directories in sdk.properties are correct for the private key, certificate, and trust.keystore files.

How can I create private keys and certificate requests in Windows?

A: In Windows, use the OpenSSL tool to create private keys and certificate requests.

We recommend that you go to https://slproweb.com/products/Win32OpenSSL.html and download OpenSSL ver1.0.2o instead of OpenSSL ver1.1.0, which has a known bug when extracting private keys.

The following are two backup links:

1) OpenSSL (32-bit): http://baas-public.oss-cn-shanghai.aliyuncs.com/Win32OpenSSL-1_0_2o.exe

2) OpenSSL (64-bit): http://baas-public.oss-cn-shanghai.aliyuncs.com/Win64OpenSSL-1_0_2o.exe

Use OpenSSL to create private keys and certificate requests by:In cmd, go to the path of Openssl.exe:cd Openssl_path

Configure the OpenSSL configuration file under the current path.set
OPENSSL_CONF=openssl.cfg

Generate private keys and corresponding certificate requests under the current pathopenssl
req -newkey rsa:2048 -keyout key_pkcs10.pem -out csr.pem

When running this command, you will be prompted to enter the following information:

> Country name (2-letter code): Enter a two-letter ISO country code. For China, enter CN.
> State or province name (full name): Enter a province, for example, Shanghai.
> Locality name (for example, city): Enter a city, for example, Shanghai.
> Organization name (for example, company): Enter an organization, for example, Pinyin of a company
> name.
> Organizational unit name (for example, section): For example, IT Dept.
> Common name (for example, your website domain name): Enter an identity used for SSL encryption.
> Email address: email address (optional)
> Challenge password: (optional)
> Optional company name: (optional)

Convert private keys from pkcs10 to pkcs8

openssl pkcs8 -in key_pkcs10.pem -inform PEM -out pkcs8.pem -outform PEM -topk8

What can I do if contracts fail to be deployed on the Cloud IDE?

A: The name of a contract must be unique on a blockchain. Since there may be a large
amount of users using the test blockchain, if your contract deployment fails, try to change
the contract name.

Enterprse Ethereum - Quroum

FAQ

Application Access

Why do users need to set username and password for accessing Quorum node in Alibaba

Cloud BaaS?

A: By setting username and password, we provide a simple authentication mechanism for securing the access to Enterprise Ethereum - Quorum interfaces. In this way, only authorized users are able to access corresponding Quorum nodes, which can satisfy the basic requirement of protecting the security of enterprise information system.

Fundamental

Why does Byzantine Fault Tolerence (BFT) consensus (like Istanbul BFT used by Quorum) require at least 4 nodes?

A: In the case of BFT with 3F+1 nodes, the system can tolerate failure of F nodes. So at least 4 nodes in total are required for reaching consensus if we need to tolerate failure of one node.

Blockchain Network and Node Management

During the process of creating a Quorum node, why did the node status show creation failed at first, and then become successful after a while?

A: Because the process of creating a blockchain node depends on numerous cloud resource creation and involves complex installation processes, the failure of any step will lead to the failure of node creation. However, BaaS provides retrying mechanism to improve robustness. So if you see the failed status within 15~40 minitues, please be patient. The system will automatically retry and re-create. So you will see that the node status shows creation failed at first, but after a while, it will become successful. But if the failed status lasts for more than one hour, please open a service ticket and we will provide support for you.

Free Trial

How to apply for free trial of Enterprise Ethereum - Quorum? And what is the resource limit during free trial?

A: You can submit application form by clicking on the **Free Trial (Quorum)** in BaaS home page. If you meet the standard of free trial, the staff will approve it.

During the free trial of Quorum, BaaS allows each user to create at most two blockchain

networks. The free trial will expire after two weeks. Before expiry, Alibaba Cloud will notify you through Message Center or Email. After expiry, Alibaba Cloud will recycle related resources automatically.