Web 3.0 Node Engine Service (NES)

Quick Start

 Issue
 01

 Date
 2024-11-28





Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

Trademarks and Permissions

NUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd. All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Contents

1 Dedicated	1
1.1 Full Nodes	1
1.1.1 Step 1: Create a Full Node	1
1.1.2 Step 2: Create and Obtain an API Key	2
1.1.3 Step 3: Combine an Endpoint and API Key	4
1.1.4 Step 4: Call Ethereum Node APIs	
1.2 Staking Nodes	5
1.2.1 Step 1: Create a Staking Node	5
1.2.2 Step 2: Create and Obtain an API Key	6
1.2.3 Step 3: Start the Staking Node	
1.2.4 Step 4: Monitor the Staking Node	9
2 Shared	
2.1 Step 1: Buy a Package	
2.2 Step 2: Create a DApp Project	
2.3 Step 3: Combine an API Key with HTTPS/WebSocket	13
2.4 Step 4: Call the API	14
2.5 Step 5: Check API Call Statistics	14

Dedicated

1.1 Full Nodes

The following sections describe how to use Node Engine Service (NES) to manage full nodes.

1.1.1 Step 1: Create a Full Node

To create a full node, you need to configure the **Public Blockchain**, **Mainnet & Testnet**, **Node Type**, **Node Specifications**, and **Nodes**.

Prerequisites

You have registered with Huawei Cloud.

- **Step 1** Log in to the NES console.
- **Step 2** Choose **Dedicated > Network Management** and click **Join Public Blockchain**.
- **Step 3** Configure parameters.

* Public Blockchain	BNB Smart Chain	Ethereum	Polygon PoS	🅎 Tron
★ Mainnet & Testnet	Mainnet A proof-of-stake (PoS) mainnet for real transactions.	Sepolia A proof-of-stake (PoS) testnet with a small amount of data and fast node startup speed.	Holesky The first-ever Ethereum testnet launched on the top of the proof- of-stake (PoS) consensus, serving as staking, in end	
* Enterprise Project 🧿	default	✓ Q Create Enterpris	e Project [2]	
* Node Type	Full node Nodes store ledger and status data o	Y a blockchain.		
* Consensus Client ③	Prysm			
* Execution Client 📀	Geth			
* Node Specifications	Node Instance Flavor		vCPUs Memory	
	Full node(Ethereum)8U32G	Stable	8vCPUs 32GiB RAM	
	Full node(Ethereum)16U64	G Robust	16vCPUs 64GiB RAM	

Figure 1-1 Creating a full node

 ${\tt Node: $0.768 USD/Hour + storage: $0.12 USD/GB/Month + {\tt API calls: $4.81 USD/Million calls} \end{tabular} \end{tabular}$

Step 4 Click Create.

Step 5 Select I have read and agree to the HUAWEI CLOUD User Agreement and Disclaimer. and click Submit.

D NOTE

It takes about 5 to 8 seconds to complete the process.

----End

1.1.2 Step 2: Create and Obtain an API Key

API keys are used for node interconnection tests. An API key can be attached to the end of a node address as a request parameter for quick interconnection.

Prerequisites

You have created a full node.

- **Step 1** On the NES console, choose **Dedicated** > **API Keys**, then click **Create API Key**.
- Step 2 Describe the API key and set the access policy.

Figure 1-2 Creating an API key

commended for node inte y once. Change the API	ned to the end of the node address a erconnection tests. For actual busine key periodically for security.	s a request parameter fo ss, use Huawei Cloud tol	r quick interconnection kens. Each API key ca	n. This is an be downloade
Enterprise Project	Select an enterprise project.	~	Q Create Enterpr	ise Project 🖸
Description	Enter a description.			
		0/1,000		
Access Policy	2b936cf8-451b-4187-8f36-0d	ld0242e355a ×	~ Ø	
larget Nodes				
Access Policy Type	Disabled White	elist Blacklist		
Target Nodes Access Policy Type	Disabled White Your DApp can only send reque Note: Set one access policy typ	elist Blacklist ests to or receive request be for each API key.	s from the whitelist.	
Target Nodes Access Policy Type Whitelist	Disabled White Your DApp can only send reque Note: Set one access policy typ Whitelist	elist Blacklist ests to or receive request te for each API key. Access Cont	s from the whitelist.	Operation

Step 3 Click **OK**. The API key is created and then automatically downloaded as a ZIP package.



NOTE

Each API key can be downloaded only once. Change the API key periodically for security. **Step 4** Decompress the package and open the **credential.csv** file to obtain the API key.

F1	$\tau \rightarrow f_x$		
	A	В	С
1	ID	Credential	
2	e5b23068-f9e4-11ed-9237-0255ac100036	QNyaAcXGqQR	
3			
4			
5			
ĥ			

1.1.3 Step 3: Combine an Endpoint and API Key

You can combine an endpoint with an API key to call Ethereum node APIs.

Prerequisites

- You have created a full node.
- You have created and obtained an API key.

Procedure

- **Step 1** On the NES console, choose **Dedicated** > **Network Management**.
- **Step 2** Click a node ID.

Select a property or enter a keyword.								0
lode ID \ominus	Status 😔	Node Type \ominus	Client \ominus	Specifications \ominus	AZ ⊕	Enterpr \ominus	Created 😔	Operati
b936ct8-451b-4187-8t36-0dd0242e355a	O Available	Full node (Staking supported)	Consensus layer: Pr Execution layer: Ge	8vCPUs 32GIB	AZ3	default	Apr 28, 202	Scale
ead902d-f8c3-450e-bda3-6971cbb2df42	O Available	Full node (Staking supported)	Consensus layer: Pr Execution layer: Ge	8vCPUs 32GiB	AZ3	default	Apr 28, 202	Scale
4be1527-15c4-4cae-a913-b6107ee07776	O Available	Full node	Consensus layer: Pr Execution layer: Ge	8vCPUs 32GiB	AZ3	default	Apr 28, 202	Scale

Step 3 Obtain the values of HTTP Endpoint and WebSocket Endpoint.

Node Engine Service (NES) / Network Management / Node Details			
< 🔵 cb9e1f92-5a5d-431d-a99d-2a553cd84 (D Available		
.			
0 A full node must be used with its API key. FAQs 🕑			×
Node Info			
Basic Info			
Node ID	Status	Public Blockchain	Mainnet & Testnet
cb9e1192-5e5d-431d-e99d-2e553cd84283	Available	Ethereum	Mainnet
Enterprise Project	AZ	Node Type	Instance Flavor
default 🕑	A25	Full node	Full node(Ethereum)8U32G
Created	HTTP Endpoint ①	WebSocket Endpoint (2)	
Nov 26, 2024 09:28:14 GMT+08:00			
Client Info			
Execution Client	Execution Client Version	Consensus Client	Consensus Client Version
Geth	v1.13.15	Prysm	v5.1.0
Montoning APIs Alarms			
			Last 30 minutes Last 1 hour Last 1 day Q
CPU Usage		Physical Memory Usage	
Unit %		Unit: %	
40		50	

Step 4 Combine the HTTP endpoint or WebSocket endpoint with an API key as follows:

- HTTP endpoint: https://your-http-endpoint/your-API key. For example, https:// 79b83c56-0a7f-11ee-9cac-0255ac10004e.web3.bcs.apsoutheast-3.myhuaweicloud.com/xxxxxxxxxx
- WebSocket endpoint: wss://*your-http-endpoint/your-API key*. For example, wss:://79b83c56-0a7f-11ee-9cac-0255ac10004e.web3.bcs.ap-southeast-3.myhuaweicloud.com/xxxxxxxxxx

----End

1.1.4 Step 4: Call Ethereum Node APIs

You can use Postman to call Ethereum node APIs.

Prerequisites

You have combined an HTTP endpoint with a credential.

Procedure

Enter the HTTP endpoint and parameters in Postman and view the returned result.

HTTP Testing / eth_blockNumber
POST v https://
Params Authorization Headers (8) Body • Pre-request Script Tests Settings
none form-data x-www-form-urlencoded raw binary GraphQL JSON V
1 된"jsonrpc": "2.0", "id": 1, "method": "eth_blockNumber", "params": []}
Body Cockies Headers (16) Test Results
Pretty Raw Preview Visualize JSON ~ 🚍
1 년 2 "jsonrpc": "2.0", 3 "id": 1, 4 "result": "0x10b4f0f" 5 년

1.2 Staking Nodes

The following sections describe how to use NES to manage staking nodes that use Prysm as the consensus client.

1.2.1 Step 1: Create a Staking Node

To create a staking node, you need to configure the **Public Blockchain**, **Mainnet & Testnet**, **Node Type**, **Node Specifications**, and **Nodes**.

Prerequisites

- You have registered with Huawei Cloud.
- You have obtained a key on Staking Launchpad. For details, see *NES User Guide (Staking Nodes)*.
- You have downloaded **Prysm** and installed it to your Linux host.

Procedure

Step 1 Log in to the NES console.

Step 2 Choose **Dedicated > Network Management** and click **Join Public Blockchain**.

Step 3 Configure parameters.

Figure 1-3 Creating a staking node

* Public Blockchain	BNB Smart Chain	Ethereum	Polygon PoS	🍞 Tron
★ Mainnet & Testnet	Mainnet A proof-of-stake (PoS) mainnet for real transactions.	Sepolia A proof-of-stake (PoS) testnet with a small amount of data and fast node startup speed.	Holesky The first-ever Ethereum testnet launched on the top of the proof- of-take (POS) consensus, serving as a taking, infrastructure, and protocol- developer testnet.	
* Enterprise Project ②	default	Q Create Enteroris	e Project [7]	
* Node Type	Evillanda (Otablen averandad)			
	Full Hode (Staking supported)	~		
	Open gRPC for Beacon Chain valid efficiently on Huawei Cloud-develo For details, see Validator APIs [2]	dator interconnection. Enjoy fast creation and C ped algorithms.	08M free of EL/CL nodes with the default 8 vC	PUs 32 GB flavor. Run your validators
★ Consensus Client ②	Open gRPC for Beacon Chain valid efficiently on Huawei Cloud-develop For details, see Validator APIs [2]	dator interconnection. Enjoy fast creation and C ped algorithms.	08M free of EL/CL nodes with the default 8 vC	PUs 32 GB flavor. Run your validators
* Consensus Client ③	Poin node (starking supported) Open gRPC for Beacon Chain valie efficiently on Huaved Cloud-develop For details, see Validator APIs [?] Prysm Prysm 5.0.0 is provided for you to 1	Lighthouse	08M free of EL/CL nodes with the default 8 vC	PUs 32 GB flavor. Run your validators
* Consensus Client ③	Paintood (staking supported) Open gRPC for Beacon Chain valie efficiently on Huswel Cloud-develo For details, see Validator APIs (Prysm Prysm 5 0.0 is provided for you to to Geth	dator interconnection. Enjoy fast creation and C eed algorithms. Lighthouse Jase Prysm validators of version 4.2.1 and later.	0.8.M free of EL/CL nodes with the default 8 vC	PUs 32 GB flavor. Run your validators
K Consensus Client ⑦ K Execution Client ⑦ Node Specifications	Profit for Beacon Chain valid officiently on Huswel Cloud-develo For details, see Validator APIs (2) Prysm Prysm 5 0.0 is provided for you to u Geth Node Instance Flavor	dator interconnection. Enjoy fast creation and C ed algorithms. Lighthouse use Prysm validators of version 4.2.1 and later.	08M free of EL/CL nodes with the default 8 vC	PUs 32 GB flavor. Run your validators
* Consensus Client ③ * Execution Client ③ * Node Specifications	Promittode (staking supported) Open offPC for Beacon Chain valie efficiently on Huswel Cloud-develo For details, see Validator APIs (?) Prysm Prysm 5.0.0 is provided for you to u Geth Node Instance Flavor Pull node(Ethereum)803:	control interconnection. Enjoy fast creation and C algorithms. Lighthouse use Prysm validators of version 4.2.1 and later. 26 Stable	38M free of EL/CL nodes with the default 8 vC vCPUs Memory 8vCPUs 32GIB RAM	PUs 32 GB flavor. Run your validators

Step 4 Click Create.

Step 5 Select I have read and agree to the HUAWEI CLOUD User Agreement and Disclaimer. and click Submit.

NOTE

- It takes about 5 to 8 seconds to complete the process.
- Currently, only staking nodes of Ethereum mainnet, Goerli, and Holesky are supported.

----End

1.2.2 Step 2: Create and Obtain an API Key

API keys are the parameter values used to start staking nodes.

Prerequisites

You have created a staking node.

- **Step 1** On the NES console, choose **Dedicated** > **API Keys**, then click **Create API Key**.
- **Step 2** Describe the API key and set the access policy.

Figure 1-4 Creating an API key

Create API Key				
Each API key can be attach ecommended for node inte only once. Change the API	ed to the end of the node addres rconnection tests. For actual bus key periodically for security.	s as a request paramet iness, use Huawei Clou	ter for quick interconnec ud tokens. Each API key	tion. This is can be downloaded
Enterprise Project	Select an enterprise project	t.	✓ Q Create Ente	rprise Project 🕑
Description	Enter a description.			
		0/1	,000,	
Access Policy	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	044024262552 ×		
Target Noues	20330010-4310-4107-0130	000024265558 ×	· 0	
Access Policy Type	Disabled Whitelis	Blacklist		
	Your DApp can only send rea Note: Set one access policy	quests to or receive req type for each API key.	uests from the whitelist.	
Whitelist	Whitelist	Access	Control By 🧿	Operation
	Add Whitelist			

Step 3 Click **OK**. The API key is created and then automatically downloaded as a ZIP package.



NOTE

Each API key can be downloaded only once. Change the API key periodically for security. **Step 4** Decompress the package and open the **credential.csv** file to obtain the API key.

F1	F17 \bullet : $\times \checkmark f_x$							
	A	В	С	D				
1	ID	Credential						
2	e5b23068-f9e4-11ed-9237-0255ac100036	QNyaAcXGqQR						
3								
4								
5								
6								

----End

1.2.3 Step 3: Start the Staking Node

Starting a staking node is to start a validator client using a key, gRPC endpoint, and TLS certificate.

Prerequisites

- You have created a staking node.
- You have created and obtained an API key.

Procedure

- **Step 1** On the NES console, choose **Dedicated** > **Network Management**.
- **Step 2** Click a node ID.

Figure 1-5 Node ID

Q Select a property or enter a keyword.								Q @
Node ID \ominus	Status 🕀	Node Type \ominus	Client \ominus	Specifications \Leftrightarrow	AZ ⇔	Enterpr 😣	Created \ominus	Operati
2b936cf8-451b-4187-8f36-0dd0242e355a	O Available	Full node (Staking supported)	Consensus layer: Pr. Execution layer: Ge	8vCPUs 32GIB	AZ3	default	Apr 28, 202	Scale
aead902d-f8c3-450e-bda3-6971cbb2df42	O Available	Full node (Staking supported)	Consensus layer: Pr Execution layer: Ge	8vCPUs 32GiB	AZ3	default	Apr 28, 202	Scale
44be1527-f5c4-4cae-a9f3-b6107ee07776	O Available	Full node	Consensus layer: Pr Execution layer: Ge	8vCPUs 32GiB	AZ3	default	Apr 28, 202	Scale
44be1527-f5c4-4cae-a9f3-b6107ee07776	 Available 	Full node	Consensus layer: Pr. Execution layer: Ge	8vCPUs 32GiB	AZ3	default	Apr 28, 202.	-

Step 3 Obtain the values of gRPC Endpoint and Node TLS Certificate.

igure 1-6 Node details					
Node Engine Service (NES) / Network Management / Node Details					
< 🚫 9ab16f45-a1fd-4e71-be4a-4b7b94950fa6 • Avail	ible				
A full node that supports staking must be used with its certificate and API key	FAQs (2		×		
Node info					
Basic Info					
Node ID	Status	Public Blockchain	Mainnet & Testnet		
9ab10f45-a1fd-4e71-be4a-4b7b94950fa6	Available	Ethereum	Mainnet		
Enterprise Project	AZ	Node Type	Instance Flavor		
default 🕑	A25	Full node (Staking supported)	Full node(Ethereum)8U32G		
Created	Display APIs for Full Node	gRPC Endpoint (for Validators)	HTTP Endpoint (for Validators) ()		
Nov 26, 2024 09:23:04 GMT+08:00		ð	đ		
Node TLS Certificate	VPC Endpoint (VPCEP)				
Download	đ				
Client Info					
Execution Client	Execution Client Version	Consensus Client	Consensus Client Version		
Geth	v1.13.15	Prysm	v5.1.0		
Staking Performance Node Status Alarms					
Check statistics for up to 800 validators since the Staking Performance funct	on became available. Buy new nodes to analyze more validators. Learn more 🕐		×		

Step 4 Paste the key and TLS certificate to the hardware machine installed with the script. Run the following command to import the key to the keystore: ./prysm.sh validator accounts import --keys-dir=<*YOUR_FOLDER_PATH>* --< *NETWORK>*

NETWORK is the staking network and *YOUR_FOLDER_PATH* is the actual key file path.

Step 5 After the key is imported, execute the **prysm.sh** file and configure the following parameters to start the staking node:

- beacon-rpc-provider: the value of gRPC Endpoint
- grpc-headers: the API key
- tls-cert: the relative path of Node TLS Certificate

For example:

./prysm.sh validator -- *beacon-rpc-provider*=xx.xx.xx:30002 -- *grpc-headers*=credential=xxxxxxxxxxxxxxxxx -- *tls-cert*=ca.crt

NOTE

These parameters are mandatory for interconnecting Huawei Cloud nodes. Check the **Prysm Documentation** to learn other parameters.

----End

1.2.4 Step 4: Monitor the Staking Node

Prerequisites

You have started a staking node.

Procedure

- **Step 1** On the NES console, choose **Dedicated** > **Network Management**.
- **Step 2** Click a node ID and click the **Node Status** tab page.

Figure 1-7 Node status

Node Engine Service (NES) / Network Management / Node D	natalis 16 O Availatte			
A full node that supports staking must be used with its certificat	e and API key. FAQs 🕐			×
Node Info				
Basic Info				
Nede ID	Status	Public Blockchain	Mainnet & Testnet	
9ab16f45-a11d-4e71-be4a-4b7b94950fa6	Available	Ethereum	Mainnet	
Enterprise Project	AZ	Node Type	Instance Flavor	
default 🕑	A25	Full node (Staking supported)	Full node(Ethereum)8U32G	
Created	Display APIs for Full Node	gRPC Endpoint (for Validators) (1) HTTP Endpoint (for Validators) (1)	
Nov 25, 2024 09:23:04 GMT+08:00		đ	ď	
Node TLS Certificate	VPC Endpoint (VPCEP)			
Download		đ		
Client Info				
Execution Client	Execution Client Version	Consensus Client	Consensus Client Version	
Geth	v1.13.15	Prysm	v6.1.0	
Staking Performance Node Status Alarms				
			Last 30 minutes	Last1 hour Last1 day Q

NOTE

You need to monitor and perform O&M on the validator client where a staking node has been started. You can also enter the key **on a page similar to the following** to check the client execution.



----End

2 Shared

2.1 Step 1: Buy a Package

Prerequisites

You have registered with Huawei Cloud.

Procedure

- **Step 1** Log in to the NES console.
- **Step 2** Choose **Shared** > **Package Management** and click **Buy Package**.
- **Step 3** Configure parameters.

< | Buy Package

Figure 2-1 Buying a package

	Basic Edition (Monthly) \$0.00 USD / month	Professional Edition (Monthly) \$49.00 USD / month	Enterprise Edition (Monthly) \$289.00 USD / month	Enterprise Edition (Yearly) \$2,388.00 USD /yearly
	Projects 10 Compute Units/Month/Million 450 Compute Units/Second 400	Projects 20 Compute Units/Month/Million 600 Compute Units/Second 990	Projects 40 Compute Units/Month/Million 2,200 Compute Units/Second 5,000	Projects 40 Compute Units/Month/Million 2,200 Compute Units/Second 5,000
		Excess: USD1.2/million CUs	Excess: USD1.0/million CUs	Excess: USD1.0/million CUs
	1 monut			
* Effective Time	The package becomes invalid if there are ex Upon expiration Immediately This package will be effective and replace y Edition (Monthly). Expiration date: May 28, 7	cess CUs. Billing Details [2] our current package immediately. The CUs in your 024	r current package will be invalid. Current packag	je: Basic
* Effective Time • Otes I you have purchased	The package becomes invalid if there are ex Upon expiration immediately This package will be effective and replace y Edition (Monthly). Expiration date: May 28, a d a package, its fees cannot be refunded and	tcess CUs. Billing Details [2] pur current package immediately. The CUs in your 2024 the CUs in it will become invalid after it expires or	r current package will be invalid. Current packag it is replaced.	ye: Basic

Step 4 Click **Next**. Confirm the configurations, confirm that you have read and agree to the agreement and disclaimer, and click **Submit**.

<	Buy Package					
	Current Package Configurations					
	Package Edition	Specifications			Duration	Time Left
	Basic Edition (Monthly) In-use	Edition Projects Compute Units/Month/Million Compute Units/Second	Basic E	dition 10 450 400	Months: 1	Days: 20
	New Package Configurations					
	Package Edition	Specifications			Duration	Price
	Basic Edition (Monthly)	Edition Projects Compute Units/Month/Million Compute Units/Second	Basic E	dition 10 450 400	Months: 1	\$0.00
	I have read and agree to the HUAWEI CLOUD User A	Agreement and Disclaimer.				
Pric	e: \$0.00 USD ③				(Cancel Previous Submit

----End

2.2 Step 2: Create a DApp Project

Prerequisites

- You have registered with Huawei Cloud.
- You have purchased a package.

- **Step 1** Log in to the NES console.
- **Step 2** Choose **Shared** > **DApp Project Management** and click **Create DApp Project**.
- **Step 3** Configure parameters.

Create

Figure 2-2 Creating a DApp project

< Create DApp Project				
* DApp Name	Enter a project name.			
* Public Blockchain	Ethereum	ờ Tron	Polygon PoS	
	n Arbitrum	BNB Smart Chain		
★ Mainnet & Testnet	Mainnet A proof-of-stake (PoS) mainnet for real transactions.	Bepolia A proof-of-stake (PoS) testnet with a small amount of data and fast node startup speed.		
Description	Enter a description.			
		0/300,		
Advanced Settings $$				

Step 4 Click Create.

----End

2.3 Step 3: Combine an API Key with HTTPS/ WebSocket

Combine the obtained API key with the HTTPS or WebSocket parameter to call the API.

Prerequisites

You have created a DApp project.

- **Step 1** On the NES console, choose **Shared** > **DApp Project Management**.
- **Step 2** Click a DApp.

Select a property	or enter a keyword.					0
ipp Name \ominus	Mainnet & Testnet 😔	API Key	HTTPS ⊖	WebSocket 😝	Created 😔	Operation
	Ethereum Mainnet		https://ethereum-mainnet.shared-fullnode.bcs	wss://ethereum-mainnet.shared-fulinode.bcs.a	Apr 25, 2024 18:48:14 GMT+08:00	Delete
	BNB Smart Chain Mai		https://bsc-mainnet.shared-fullnode.bcs.ap-so	wss://bsc-mainnet.shared-fullnode.bcs.ap-sout	Jan 31, 2024 11:16:07 GMT+08:00	Delete
	Tron Nile		https://tron-nile.shared-fullnode.bcs.ap-southe		Jan 31, 2024 11:15:24 GMT+08:00	Delete
	Tron Mainnet		https://tron-mainnet.shared-fullnode.bcs.ap-so	**	Jan 31, 2024 11:14:57 GMT+08:00	Delete
	Ethereum Sepolia		https://ethereum-sepolia.shared-fullnode.bcs.a	wss://ethereum-sepolia.shared-fullnode.bcs.ap	Jan 31, 2024 11:14:35 GMT+08:00	Delete
	Ethereum Goerli	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	https://ethereum-goerli.shared-fullnode.bcs.ap	wss://ethereum-goerli.shared-fullnode.bcs.ap	Jan 31, 2024 11:14:16 GMT+08:00	Delete
	Ethereum Mainnet		https://ethereum-mainnet.shared-fulinode.bcs	wss://ethereum-mainnet.shared-fullnode.bcs.a	Jan 31, 2024 11:13:20 GMT+08:00	Delete
	Ethereum Mainnet		https://ethereum-mainnet.shared-fulinode.bcs	wss://ethereum-mainnet.shared-fulinode.bcs.a	Dec 20, 2023 11:23:27 GMT+08:00	Delete

Step 3 Obtain the values of API Key, WebSocket, and HTTPS.

<							
Basic Settings							
API Key	& C		DApp	ID	86fac3d704eb000f9910b7374504c8ae 🗇		
Latest Block Height	19831297		WebS	locket		đ	
Total Calls	6		HTTP	18		đ	
Created	Apr 25, 2024 18:48:14 GMT+08:00		Public	: Blockchain	Ethereum		
Mainnet & Testnet	Ethereum Mainnet		Descr	ription	-		
APIs Access Policie							
_							
							Last hour 🗸
Median Response 1	ïme			Max. Response Time	•		
Unit: Millisecond				Unit: Millisecond			
0.8				0.8			
0.6				0.6			
0.4				0.4			
0.2				0.2			
0.2				0.2			
0 0 0 0		T-0200 May 09 2024 16 21 22 GMT 09 00	-	0 0 0000000000000000000000000000000000	1920 May 09 2024 155522 GMT 10800	Mar 00 2024 16/21/22 Gb	47+08-00

Step 4 Combine the HTTP or WebSocket parameter with the API key as follows:

- HTTP: https://your-http-endpoint/api-key. For example, https://polygonmainnet.shared-fullnode.bcs.ap-southeast-3.myhuaweicloud.com/v1/ xxxxxxxxxxx
- WebSocket: wss://your-http-endpoint/api-key. For example, wss://polygonmainnet.shared-fullnode.bcs.ap-southeast-3.myhuaweicloud.com/v1/ xxxxxxxxxxx

----End

2.4 Step 4: Call the API

You can use Postman to call APIs.

Prerequisites

You have obtained the API key and HTTPS.

Procedure

Enter HTTP parameters and other values in Postman and view the returned result.

POST v Imps.//			Send
Params Authorization Headers (11) Body Pre-request Script Tests Settings		Body Cookles Headers (11) Test Results	Status: 200 OK Time: 68 ms Size: 426 8 Save Response ~
le none le form-data le k-www-form-uriencoded le raw le binary le GraphQL JSON V			B Q
1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 8 1 4 1 4 4 4 4 5 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4	, ,

2.5 Step 5: Check API Call Statistics

Prerequisites

- You have created a DApp project.
- You have called the API.

Procedure

Step 1 On the NES console, choose **Shared** > **DApp Project Management**.

Step 2 Click a DApp.

DApp Project Manag	ement ③					Create DApp Project
Q Select a property of	r enter a keyword.					Q ()
DApp Name \ominus	Mainnet & Testnet	API Key	HTTPS 🕀	WebSocket 🖯	Created 🖯	Operation
	Ethereum Mainnet		https://ethereum-mainnet.shared-fullnode.bcs	wss://ethereum-mainnet.shared-fullnode.bcs.a	Apr 25, 2024 18:48:14 GMT+08:00	Delete
	BNB Smart Chain Mai		https://bsc-mainnet.shared-fullnode.bcs.ap-so	wss://bsc-mainnet.shared-fullnode.bcs.ap-sout	Jan 31, 2024 11:16:07 GMT+08:00	Delete
	Tron Nile		https://tron-nile.shared-fullnode.bcs.ap-southe	-	Jan 31, 2024 11:15:24 GMT+08:00	Delete
	Tron Mainnet		https://tron-mainnet.shared-fullnode.bcs.ap-so	-	Jan 31, 2024 11:14:57 GMT+08:00	Delete
	Ethereum Sepolia		https://ethereum-sepolia.shared-fullnode.bcs.a	wss://ethereum-sepolia.shared-fullnode.bcs.ap	Jan 31, 2024 11:14:35 GMT+08:00	Delete
	Ethereum Goerli	&	https://ethereum-goerli.shared-fullnode.bcs.ap	wss://ethereum-goerli.shared-fullnode.bcs.ap	Jan 31, 2024 11:14:16 GMT+08:00	Delete
	Ethereum Mainnet		https://ethereum-mainnet.shared-fullnode.bcs	wss://ethereum-mainnet.shared-fullnode.bcs.a	Jan 31, 2024 11:13:20 GMT+08:00	Delete
	Ethereum Mainnet		https://ethereum-mainnet.shared-fullnode.bcs	wss://ethereum-mainnet.shared-fullnode.bcs.a	Dec 20, 2023 11:23:27 GMT+08:00	Delete
Total Records: 8	 ✓<1 					

Step 3 Check the API call statistics.

sic Settings			
Key	& O	DApp ID 85fac3d704eb0005910b7374504c8ae 🖒	
ist Block Height	19831330	WebSocket	đ
/ Calls	6	HTTPS	đ
ated	Apr 25, 2024 18:48:14 GMT+08:00	Public Blockchain Ethereum	
nnet & Testnet	Ethereum Mainnet	Description	
Access Polici	8		Lat m. v
s Access Polici	es Time	Max. Response Time	Lat m
s Access Polici Median Response Unit: Militecond 1	es Time	Max. Response Time Unite Milliaread 19	(Latin
Access Polici Median Response Unit: Milisecond 1 0.8	es Time	Max. Response Time Unit Millerand 10 9 Mary	<u>(Lata. ∨</u> 4, 2024 16:3619 GMT+08:00
s Access Polici Median Response Unit: Milisecond 1 0.8	cs Time	Max. Response Time Uch Milliarend 10 0 May(•	(Lat m
S Access Polici Median Response Unit: Milissecond 1 0.8 0.6	es Time	Max. Response Time Uch Milliarend 10 8 May 6	(<u>Latra.</u> ∨ 4, 2024 16:36:19 GMT+08:00 0
IS Access Polici Median Response Unit: Milisacond 1 0.8 0.6 0.4	es Time	Max.Reponse Time Unit Milliorend 10 6 6 4	(<u>Latra</u>

----End