CONNECTWORLD PAYMENTS API

March 2024

**Updated July 2024 to introduce
Independently Operating Merchants under a Project**

USING CONNECTWORLD's MULTICURRENCY GATEWAY

ConnectWorld (ConnectW) is a compliant, multicurrency, low fee, bi-directional payment gateway developed for projects and organizations in the global south, and especially in African communities. ConnectW is compliant in that the requisite licenses to process fiat payments are maintained in jurisdictions where it operates.

ConnectW requires each merchant of the platform to be registered onto the gateway. Once registered, the merchant can invoke the gateway to receive payments.

Update: In July 2024, ConnectW introduced a independent merchant framework, where some authorized projects could set up independently operating merchants with their own separate accounts operating as subprojects. In this scenario, the privileges the project has can be finetuned and granted by such projects to their merchants. The calls for setting up and managing such merchants are introduced in API calls 17 through 23. Note that sub-merchants can make similar payment gateway calls as the projects, and they are independently recorded for the merchants, like a sub-project:

Registration

To register, all the merchant needs to do is provide their onchain address, and it will be included or whitelisted to use the gateway.

Receiving Payments

To receive payments, the merchant needs to call the **paymentinitialize** API indicating the amount to be paid and the digital product that they wish to be provided to the payer. If the merchant is exchanging the received payment for some token on the chain, the merchant needs to have the amount in value residing in their account at the time of making the payment initialize API call.

Once processed, the gateway will receive the payment in fiat from the customer on behalf of the merchant. If the merchant is receiving the payment for a token managed on the payment gateway, the token is provided to the indicated customer's address onchain. Otherwise, the merchant may provide provenance within their own system on confirmation

of the payment. Once the payment is cleared, the amount is deposited into the merchant's address onchain. If the merchant is set up with passthrough information, the fiat amounts are sent to the customer's address.

For certain payment types that require the customer to make their transfer through a different medium such as their bank account, the merchant may additionally need to make a call to **recordpayment** to complete the process of crediting the customer onchain.

API #5 : INITIALIZE PAYMENT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE: **https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": "paymentinitialize",
    "params": [
        {
            "name": "currency",
            "value": "USD" //current options are USD, EUR, NGN - defaut
        },
        {
            "name": "address",
            "value": "0x2e6e558780c9adc9ae5a9dad2066e56f98d3b18a"
        },
        {
            "name": "amount",
            "value": "1"
        },
        {
            "name": "success_url",
            "value": https://toronet.org/wallet/ //should point to the merchant App
        },
        {
            "name": "cancel_url",
            "value": https://toronet.org/cancel //should point to the merchant App
        },
        {
```

```
            "name": "feetype",
            "value": "0" //0 - customer pays offchain, 1 customer pays onchain, 2
merchant pays onchain (optional, default to 0)
        },
        {
            "name": "passthrough",
            "value": "0" // 0 - default, 1- if set up for passthrough (optional)
        },
        {
            "name": "exchange",
            "value": "0" // 0 exchange from own balance- default
        },
        //the following inputs are optional. however omitting them could result in KYC
requests for your first time customers.
        {
            "name": "payername",
            "value": "Dr. Adam Bartholomew"
        },
        {
            "name": "payeraddress",
            "value": "11 Olaoye Close"
        },
        {
            "name": "payercity",
            "value": "Lagos"
        },
        {
            "name": "payerstate",
            "value": ""
        },
        {
            "name": "payercountry",
            "value": ""
        },
        {
            "name": "payerzipcode",
            "value": ""
        },
        {
            "name": "payerphone",
            "value": ""
        },
        {
            "name": "description",
            "value": "Deposit"
        },
        {
            "name": "checkouttype",
```

```
            "value": "paymentintent"
        }
    ]
}
```

API #5 : RECORD PAYMENT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY
```
{
    "op": "recordpayment",
    "params": [
        {
            "name": "currency",
            "value": "USD" //current options are USD, EUR, NGN - defaut
        },
        {
            "name": "txid",
            "value": "8900510688"
        },
        {
            "name": "checkouttype",
            "value": "paymentintent"
        }
    ]
}
```

Input List

Below is description for each of the above input list for **paymentinitialize**, in addition to the comments already included within the API body.

Input	Data Type/Options	Description
Header Variables		
admin	address	Merchant address registered to use the payment gateway and having a balance sufficient to provide the amount in the digital product or token for an amount paid in fiat on the payment gateway.
adminpwd	Alphanumeric	Merchant password
Variables in the Body of the Call		
Currency	USD, NGN	The currency the payment was paid in.
Token or Product	ProductID, Token	The digital item being purchased. When not provided or when it is a registered product, this is simply recorded as a payment which will be recorded in the admin account.
Address	Blockchain address	The address of the customer making the payment, which will receive the token.
Amount	Money	Amount to pay
SuccessURL	URL	URL to direct the user to after making the payment
CancelURL	URL	URL to direct the user to if the user cancels the payment at any step prior to making it.
Feetype	0, 1, 2	0 – customer is charged the fee as a service charge while paying the amount specified 1 – Customer is charged the fee in the digital token on chain 2 – the merchant address is changed the fee.
Passthrough	0, 1	0 – No passthrough is set, merchant receives the amounts paid onchain 1 – Merchant has set up a fiat address to which the paid amounts are sent.
Exchange	0	The amounts purchased is dispensed to the customer's address from the merchant address
Customer Information	Alphanumeric	The customer information including name and address is provided with the payer information. If not provided, KYC info might be requested from the customer. If the customer's wallet has made payments before, then this information might not be requested from the customer.

Below is description for each of the above input list for **recordpayment**, in addition to the comments already included within the API body.

Input	Data Type/Options	Description
Header Variables		
admin	address	Merchant address registered to use the payment gateway and having a balance sufficient to provide the amount in the digital product or token for an amount paid in fiat on the payment gateway.
adminpwd	Alphanumeric	Merchant password
Variables in the Body of the Call		
Txid	Alphanumeric	The transactionID provided from the paymentinitialize call
Currency	USD, NGN	The currency the payment was paid in.

API #6 : RECORD PRODUCT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE: **https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "recordproduct",
    "params": [
        {
            "name": "productid",
            "value": "001" //unique id for your product
        },
        {
            "name": "productname",
            "value": "PAYMENT" //name of the product
        },
        {
            "name": "description",
            "value": "This is a payment for Toros."
        },
        {
            "name": "productimage",
            "value": "https://toronet.org/explorer/images/toro-logo.png"
        }
    ]
}
```

API #6 : UPDATE PRODUCT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE: **https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": "updateproduct",
    "params": [
        {
            "name": "productid",
            "value": "001" //unique id for your product
        },
        {
            "name": "productname",
            "value": "PAYMENT" //name of the product
        },
        {
            "name": "description",
            "value": "This is a payment for Toros"
        },
        {
            "name": "productimage",
            "value": "https://toronet.org/explorer/images/toro-logo.png"
        }
    ]
}
```

The following are APIs to query status of transactions:

1. GetProject
   This call with provide you information on your project settings, balances, including any pending transactions.
2. GetbankList
   This call will provide you a bank list for you to use if using the withdrawal APIs
3. GetfiatgransactionbyTxID
   This call will provide you information on a payment transaction
4. GetfiatwithdrawalbyTxID
   This call will provide you information on a withsrawal transaction
5. Getfiattransactions_address_range
   This call will provide you information on all payment transactions for a given customer address
6. Getfiatwithdrawals_address_range
   This call will provide you information on all payment withdrawals for a given customer address
7. Getfiatwithdrawals_recorder_range
   This call will provide you information on all payment transactions for your recorder or merchant address
8. Getfiattransactions_recorder_range
   This call will provide you information on all withdrawal transactions for your recorder or merchant address

API #7 : GET PROJECT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getproject",
    "params": [{"name":"getbalances", "value":"true"}]
}
```

API #8 : GET BANK LIST

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getbanklist",
    "params": [
        {
            "name": "currency",
            "value": "NGN" //current options are USD, NGN
        }
    ]
}
```

API #9 : GET PAYMENT TRANSACTION BY ID

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": "getfiattransactions_txid",
    "params": [
        {
            "name": "txid",
            "value": "pi_3OoFDgHQMdeh9eQU0fy3ERVx"
        }
    ]
}
```

API #10 : GET WITHDRAWAL TRANSACTION BY ID

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": " getfiatwithdrawals_txid",
    "params": [
        {
            "name": "txid",
            "value": "pi_3OoFDgHQMdeh9eQU0fy3ERVx"
        }
    ]
}
```

API #11 : GET PAYMENT TRANSACTION BY CUSTOMER

POST: **https://www.toronet.org/api/payment/toro/**
POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": "getfiattransactions_address_range",
    "params": [
        {
            "name": "addr",
            "value": "0xbd5B12909291434b17D785AD0a00b8A6Da9b9ac5"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        }
    ]
}
```

API #12 : GET WITHDRAWAL TRANSACTION BY CUSTOMER

POST: **https://www.toronet.org/api/payment/toro/**
POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getfiatwithdrawals_address_range",
    "params": [
        {
            "name": "addr",
            "value": "0x2e6e558780c9adc9ae5a9dad2066e56f98d3b18a"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        }
    ]
}
```

API #13 : GET PAYMENT TRANSACTION BY MERCHANT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getfiatwithdrawals_recorder_range",
    "params": [
        {
            "name": "addr",
            "value": "0x6b03eea493cfeab887f40969e40b069bb334f632"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        }
    ]
}
```

API #14 : GET WITHDRAWAL TRANSACTION BY MERCHANT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE: **https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```json
{
    "op": "getfiattransactions_recorder_range",
    "params": [
        {
            "name": "addr",
            "value": "0x6b03eea493cfeab887f40969e40b069bb334f632"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "toro" //these are added so user can total by currency if needed
        }
    ]
}
```

API #15 : GET PRODUCT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getproduct",
    "params": [
        {
            "name": "productid",
            "value": "001" //unique id for your product
        }
    ]
}
```

Making Withdrawals

If you are not set up with passthrough, you would typically accumulate a balance in tokens in your address. You can withdraw that amount at any time once it has cleared using the withdrawal APIs. To request a withdrawal, simply make the recordwithdrawal API call, which is described below:

API #16 : RECORD WITHDRAWAL

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "recordfiatwithdrawal",
    "params": [
        {
            "name": "addr",
            "value": "0x2e6e558780c9adc9ae5a9dad2066e56f98d3b18a"
        },
        {
            "name": "pwd",
            "value": "Toronet"
        },
        {
            "name": "currency",
            "value": "NGN"
        },
        {
            "name": "token",
            "value": "ngn"
        },
        {
            "name": "gateway",
            "value": "fcmb"
        },
        {
            "name": "payername",
            "value": "Ken Alabi"
```

```json
    },
    {
        "name": "payeremail",
        "value": "alabi.kenn@gmail.com"
    },
    {
        "name": "payeraddress",
        "value": ""
    },
    {
        "name": "payercity",
        "value": ""
    },
    {
        "name": "payerstate",
        "value": ""
    },
    {
        "name": "payercountry",
        "value": ""
    },
    {
        "name": "payerzipcode",
        "value": ""
    },
    {
        "name": "payerphone",
        "value": ""
    },
    {
        "name": "description",
        "value": "tNGN Withdrawal"
    },
    {
        "name": "amount",
        "value": "1000"
    },
    {
        "name": "accounttype",
        "value": "ach"
    },
    {
        "name": "bankname",
        "value": "GTBank Plc"
    },
    {
        "name": "routingno",
        "value": "000013"
```

```
        },
        {
            "name": "accountno",
            "value": "0125226043"
        },
        {
            "name": "expirydate",
            "value": "optional"
        },
        {
            "name": "accountname",
            "value": "ken alabi"
        },
        {
            "name": "recipientstate",
            "value": "ny"
        },
        {
            "name": "recipientzip",
            "value": "11778"
        },
        {
            "name": "recipientphone",
            "value": "6314133172"
        }
    ]
}
```

.

API #17 : CREATE A SUB MERCHANT

This call is used to create a sub merchant of a project. Only a project authorized to create sub-merchants can successfully make this call. All privileges the project assigns to the sub merchant are a derivative of it's own privileges.

POST: **https://www.toronet.org/api/payment/toro/**
POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS
Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "recordmerchant",
    "params": [
        {
            "name": "merchantaddress",
            "value": "0xc43da1792d94d443dfe6de07563f11c287d828cd" //blockchain address
        },
        {
            "name": "merchantname",
            "value": "Test Merchant" //name of the project
        },
        {
            "name": "description",
            "value": "This is a test project for Toros."
        },
        {
            "name": "merchantimage",
            "value": "https://toronet.org/explorer/images/toro-logo.png"
        },
        {
            "name": "cancreatevirtualcards",
            "value": "0" // optional. default 0, 1- can create virtual cards
        },
        {
            "name": "maxtxn",
            "value": "500" // max txn amount in USD. Optional. Can not be greater than
projects
        },
        {
            "name": "mintxn",
```

```
            "value": "1" // min txn amount in USD. Optional. Can not be less than
projects
        },
        {
            "name": "minbal",
            "value": "1" // minimum balance in USD. Optional. Can not be less than
projects
        }
    ]
}
```

API #18 : UPDATE A SUB MERCHANT

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE: **https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "updatemerchant",
    "params": [
        {
            "name": "merchantaddress",
            "value": "0xc43da1792d94d443dfe6de07563f11c287d828cd" //blockchain address
        },
        {
            "name": "merchantname",
            "value": "Test Merchant" //name of the project
        },
        {
            "name": "description",
            "value": "This is a test project for Toros."
        },
        {
            "name": "merchantimage",
            "value": "https://toronet.org/explorer/images/toro-logo.png"
        },
        {
            "name": "cancreatevirtualcards",
            "value": "0" // optional. default 0, 1- can create virtual cards
        },
        {
            "name": "maxtxn",
            "value": "500" // max txn amount in USD. Optional. Can not be greater than
projects
        },
        {
            "name": "mintxn",
            "value": "1" // min txn amount in USD. Optional. Can not be less than
projects
        },
        {
            "name": "minbal",
```

```
            "value": "1" // minimum balance in USD. Optional. Can not be less than
projects
        }
    ]
}
```

API #19 : VIEW A SUB MERCHANT

Sub-merchants can use the same getproject call in API # 7 to retrieve information on their own account. So can a project. This call also shows the submerchant balances. However, to view just the set up information on a merchant, please use the following call:

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getmerchant",
    "params": [
        {
            "name": "merchantaddress",
            "value": "0xc43da1792d94d443dfe6de07563f11c287d828cd" //blockchain address
        }
    ]
}
```

API #20 : VIEW ALL SUB MERCHANTS

To view all sub merchants of a given project, use the following call:

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS
Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY
```
{
    "op": "getallmerchants",
    "params": [
        {
            "name": "merchantaddress",
            "value": "0xc43da1792d94d443dfe6de07563f11c287d828cd" //blockchain address
        }
    ]
}
```

API #21 : VIEW TOP PROJECT TOTAL DEPOSIT TRANSACTIONS INCLUDING SUB MERCHANTS

To view a given project's total deposits, including sub-merchants, use the following call:

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getfiattransactions_parentaddress_range",
    "params": [
        {
            "name": "addr",
            "value": "0xc6c4117a52a172ea631bf5a0f87a60d8a44ec3f0"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        }
    ]
}
```

API #22 : VIEW TOP PROJECT TOTAL WITHDRAWAL TRANSACTIONS INCLUDING SUB MERCHANTS

To view a given project's total deposits, including sub-merchants, use the following call:

POST: **https://www.toronet.org/api/payment/toro/**
POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS

Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY

```
{
    "op": "getfiatwithdrawals_parentaddress_range",
    "params": [
        {
            "name": "addr",
            "value": "0x2e6e558780c9adc9ae5a9dad2066e56f98d3b18a"
        },
        {
            "name": "startdate",
            "value": "2022-08-01"
        },
        {
            "name": "enddate",
            "value": "2024-11-18"
        },
        {
            "name": "currency", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        },
        {
            "name": "token", //optional. defaults to all if not provided
            "value": "ngn" //these are added so user can total by currency if needed
        }
    ]
}
```

API #23 : VIEW TOP PROJECT TOTAL BALANCE INCLUDING SUB MERCHANTS

The usual blockchain provided getbalance call will provide the balance in a project's address. So will with getproject call, which will additionally show balances in transit in the project's hold address. To view a given project's balance, including sub-merchants, use the following call:

POST: **https://www.toronet.org/api/payment/toro/**

POST ALTERNATIVE**: https://restapi.connectw.com/api/payment/**

HEADERS
Content-Type:application/json
x-api-key: <>
admin: <merchant's address>
adminpwd:<merchant's password>

BODY
```
{
    "op": "getparentaddrbalance",
    "params": [
        {
            "name": "addr",
            "value": "0xc6c4117a52a172ea631bf5a0f87a60d8a44ec3f0"
        }
    ]
}
```