Building on the XRPL

XRP LEDGER

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XRPL Developer Relations
Ripple

Goals

1. XRP Ledger & Ripple
2. Building on XRP Ledger
3. A Broader Ecosystem

Important Terms

XRP LEDGER

Layer-1 Blockchain

The XRP Ledger is a secure, decentralized and public blockchain with ultra-low transaction fees.

XRP

Native Digital Asset

XRP is the native digital asset.

XRP is one of the only two cryptocurrencies with clear regulatory status in the US.

ripple

Crypto Solutions Company

Ripple is a technology company that builds crypto solutions for business.

Ripple is one of many developers building on and contributing to the XRP Ledger.

Source: https://ripple.com/xrp/, https://xrpl.org/faq.htm, https://ripple.com/insights/q1-2023-xrp-markets-report/l

1BN XRP FUND

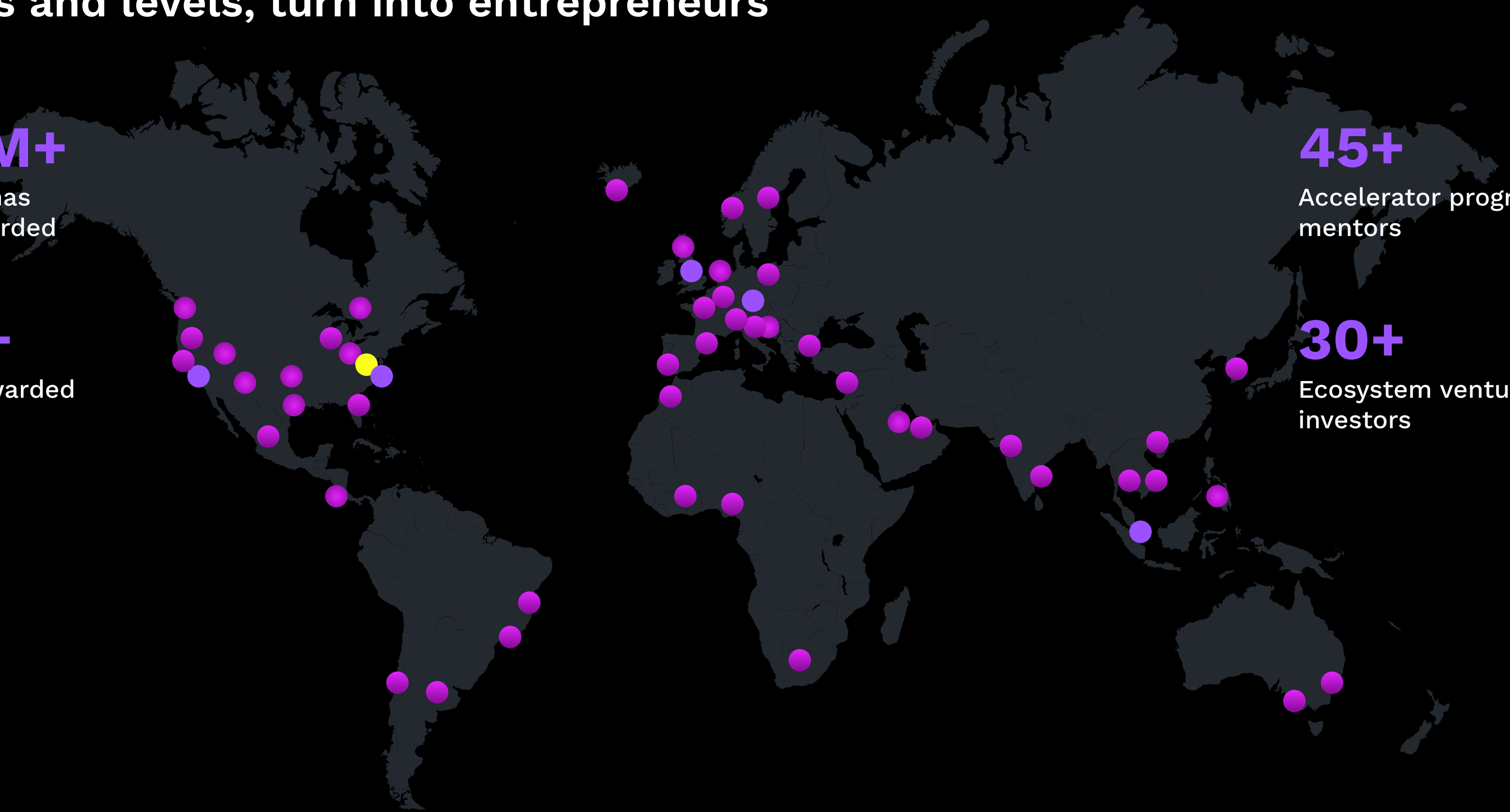
XRPL Grants

Funding to foster and support development of new innovative projects on XRPL

XRPL Accelerator

A program for entrepreneurs to scale their projects into thriving businesses

Developer funding programs support builders on XRPL, at various stages and levels, turn into entrepreneurs



$16M+
Funding has been awarded

150+
Teams awarded globally

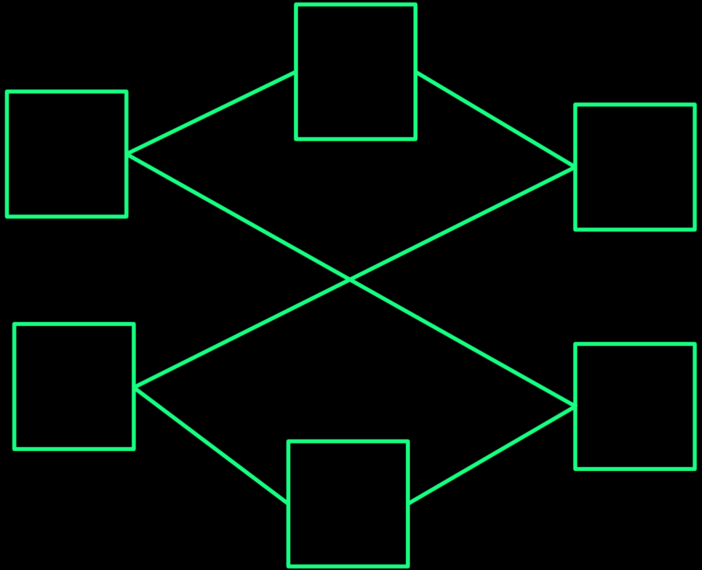
30+
Countries reached

45+
Accelerator program mentors

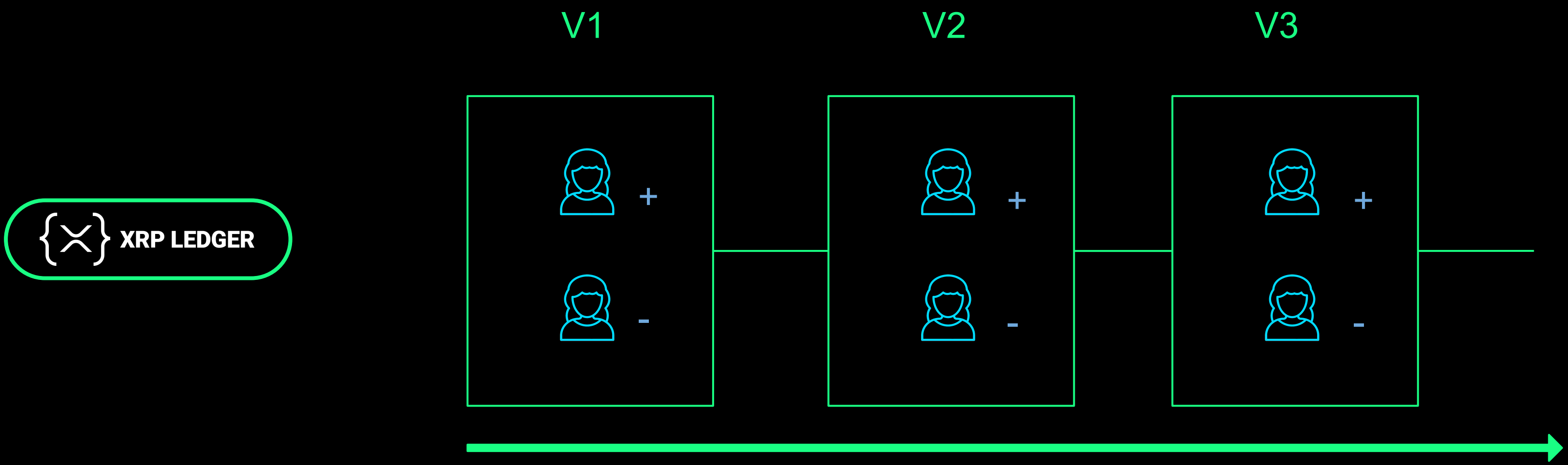
30+
Ecosystem venture investors

Decentralized Network

XRP LEDGER

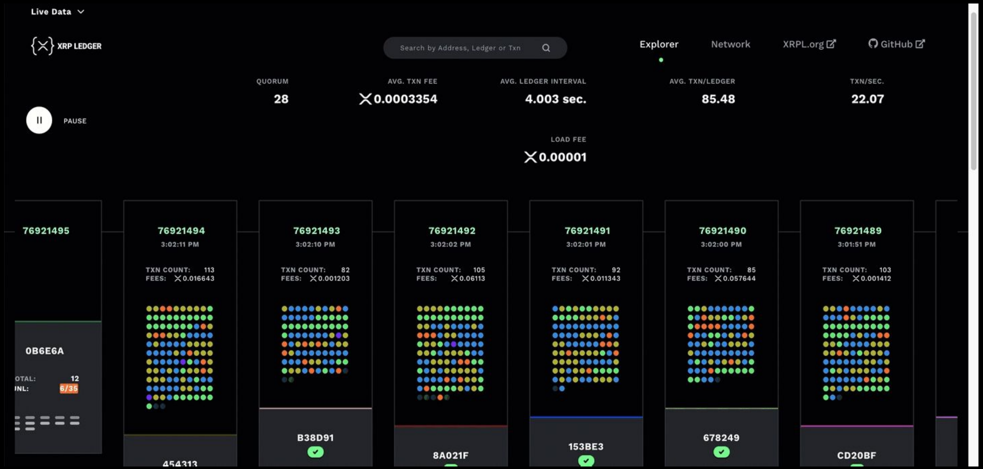


Ordering Transactions



Every 3 Seconds

XRP LEDGER



Live Data

XRP LEDGER

Search by Address, Ledger or Txn

Explorer Network XRPL.org GitHub

PAUSE

QUORUM	AVG. TXN FEE	AVG. LEDGER INTERVAL	AVG. TXN/LEDGER	TXN/SEC.
28	✕0.0003354	4.003 sec.	85.48	22.07

LOAD FEE
✕0.00001

76921495	76921494	76921493	76921492	76921491	76921490	76921489
	3:02:11 PM	3:02:10 PM	3:02:02 PM	3:02:01 PM	3:02:00 PM	3:01:51 PM
	TXN COUNT: 113	TXN COUNT: 82	TXN COUNT: 105	TXN COUNT: 92	TXN COUNT: 85	TXN COUNT: 103
	FEES: ✕0.016643	FEES: ✕0.001203	FEES: ✕0.06113	FEES: ✕0.011343	FEES: ✕0.057644	FEES: ✕0.001412
0B6E6A	454313	B38D91	8A021F	153BE3	678249	CD20BF

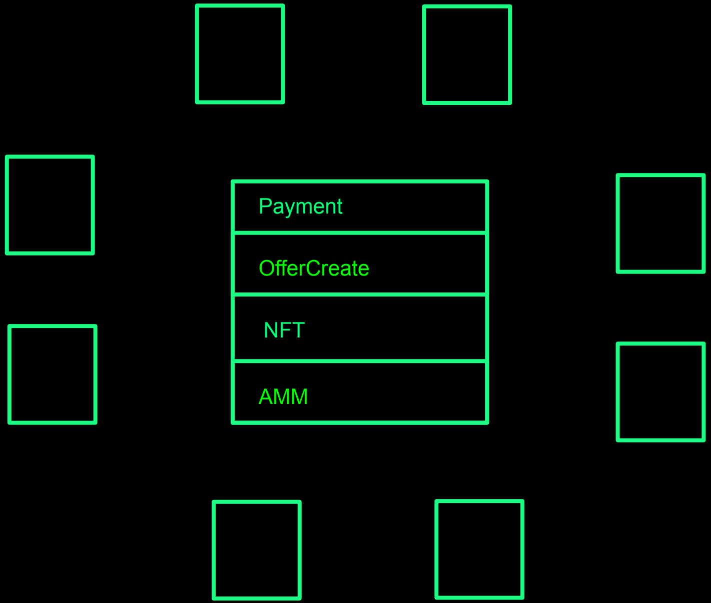
OTAL: 12
INL: 6/35

Native Features

XRP LEDGER

- Payment
- OfferCreate
- NFT
- AMM
- ...

Guild

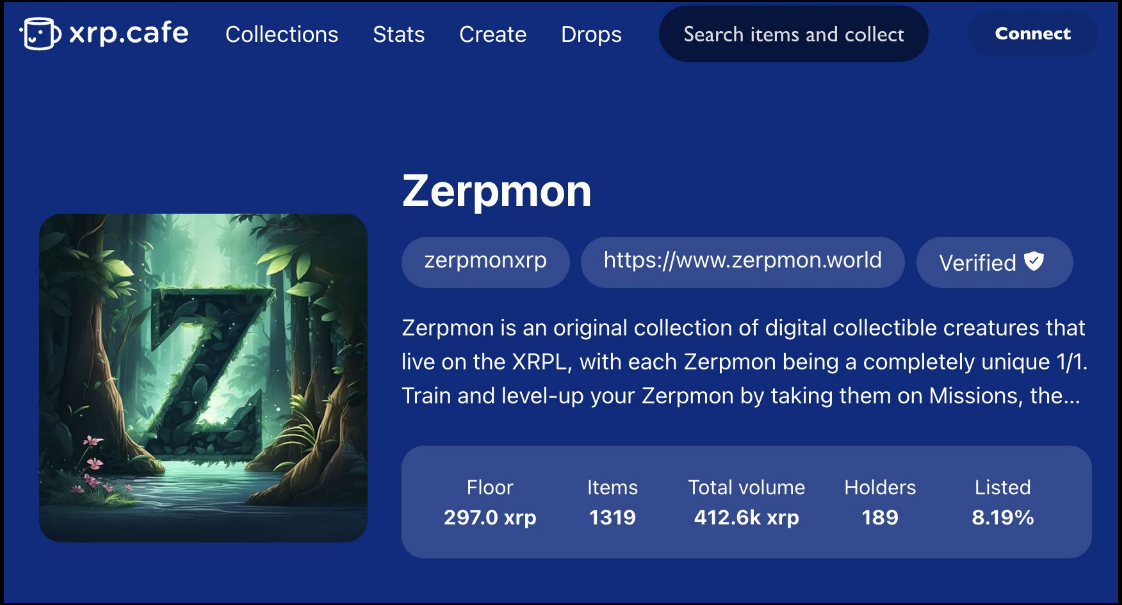


NFT Feature Going Live

Amendment Summary

Name	NonFungibleTokensV1_1	Status	ENABLED MAINNET
Amendment ID	32A122F1352A4C7B3A6D790362CC34749C5E57FCE896377BFDC6CCD14F6CD627	**Yeas:**	32
Introduced in	v1.9.2	**Nays:**	3
Enabled by:	251242639A640CD9287A14A476E7F7C20BA009FDE410570926BAAF29AA05CEDE	**Consensus:**	91.43%
Threshold:	28/35 votes	**Enabled on:**	Oct 31, 2022, 08:50:50 PM UTC
Details:	https://xrpl.org/known-amendments.html#nonfungibletokensv1_1		

Collections & Marketplaces



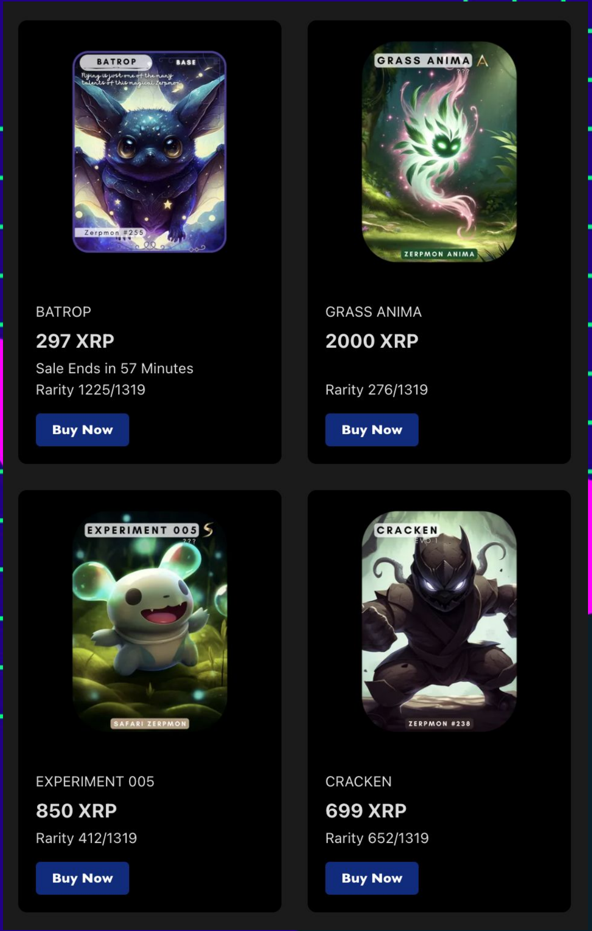
xrp.cafe Collections Stats Create Drops Search items and collect Connect

Zerpmon

zerpmonxrp https://www.zerpmon.world Verified

Zerpmon is an original collection of digital collectible creatures that live on the XRPL, with each Zerpmon being a completely unique 1/1. Train and level-up your Zerpmon by taking them on Missions, the...

Floor	Items	Total volume	Holders	Listed
297.0 xrp	1319	412.6k xrp	189	8.19%



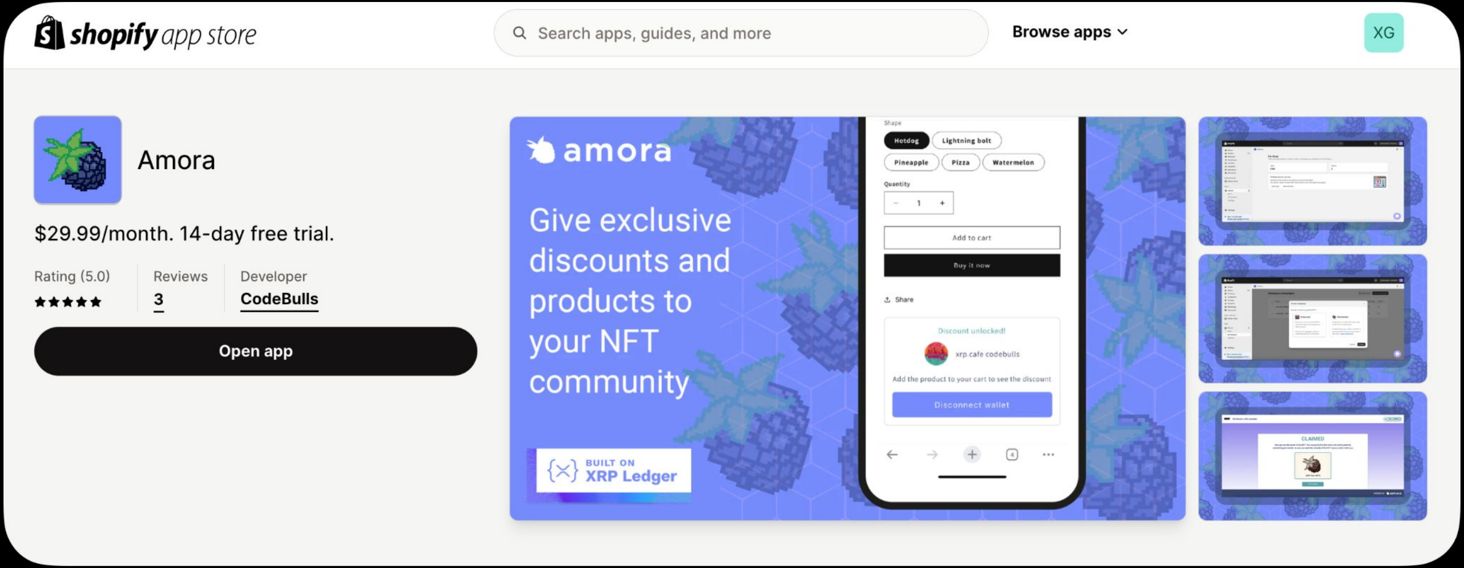
BATROP
297 XRP
Sale Ends in 57 Minutes
Rarity 1225/1319
Buy Now

GRASS ANIMA
2000 XRP
Rarity 276/1319
Buy Now

EXPERIMENT 005
850 XRP
Rarity 412/1319
Buy Now

CRACKEN
699 XRP
Rarity 652/1319
Buy Now

Token-Gated Commerce



Amora

$29.99/month. 14-day free trial.

Rating (5.0) ★★★★★ | Reviews 3 | Developer CodeBulls

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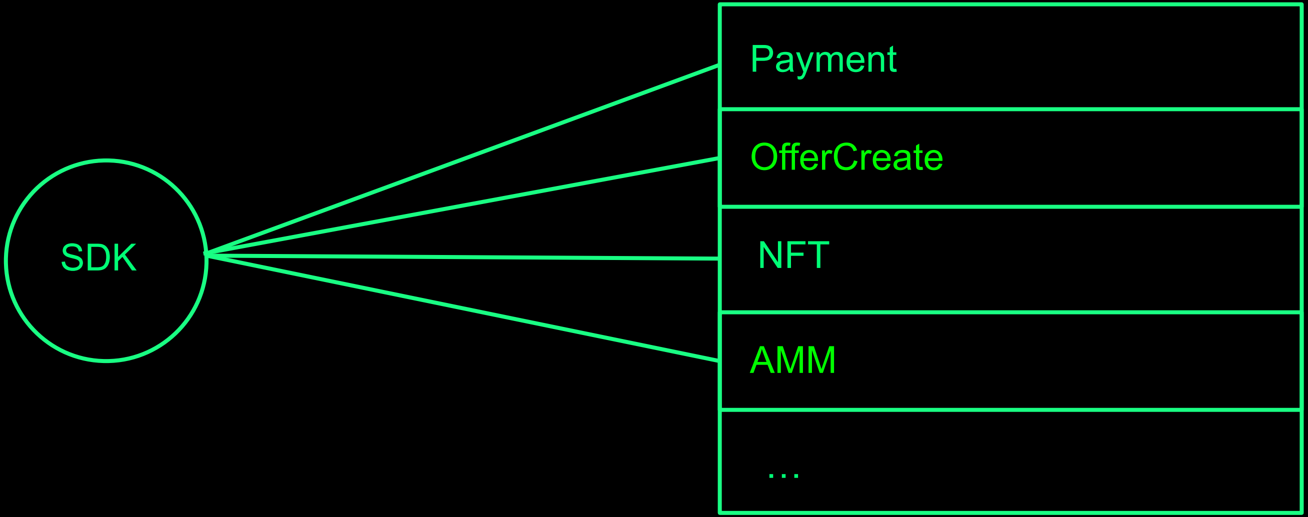
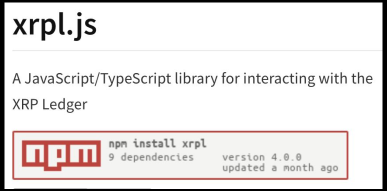
Client Libraries



Different Options

Programming Languages:

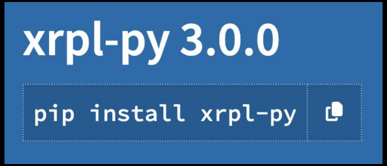
xrpl.js (JavaScript)
xrpl-py (Python)
xrpl4j (Java)



xrpl.js

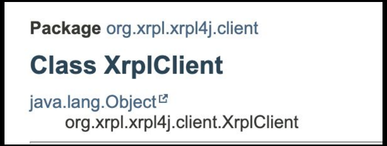
A JavaScript/TypeScript library for interacting with the XRP Ledger

```
npm install xrpl
9 dependencies      version 4.0.0
                    updated a month ago
```



xrpl-py 3.0.0

```
pip install xrpl-py
```



Package org.xrpl.xrpl4j.client

Class XrplClient

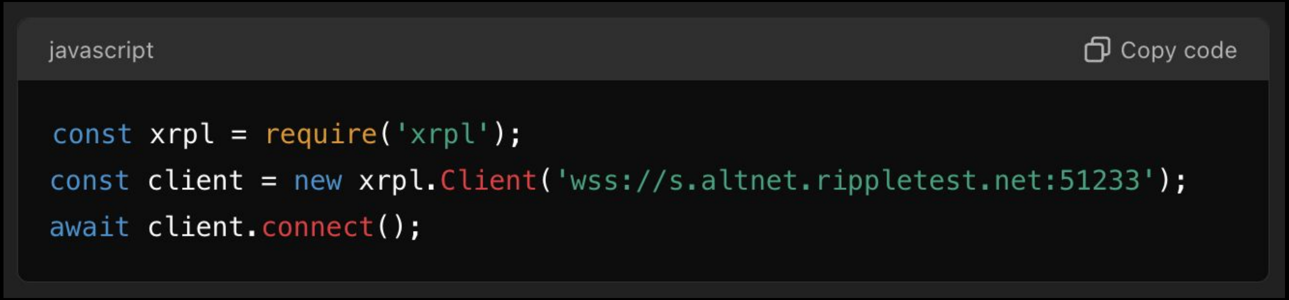
java.lang.Object
org.xrpl.xrpl4j.client.XrplClient

xrpl.js code walkthrough

(basic Payment transaction)

xrpl.js: Setting Up the Client

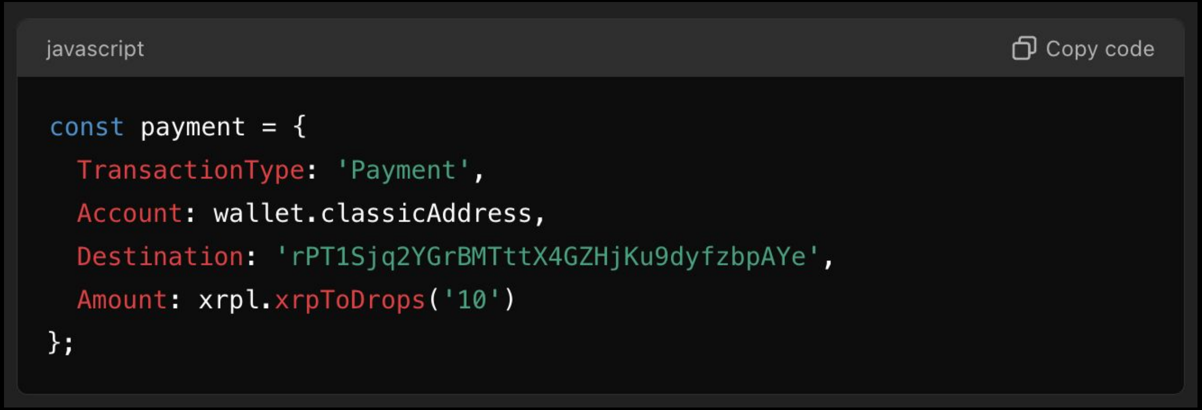
- Connection example:
    - Create an instance of a client


javascript
Copy code

```javascript
const xrpl = require('xrpl');
const client = new xrpl.Client('wss://s.altnet.rippletest.net:51233');
await client.connect();
```

xrpl.js: Sending a Payment

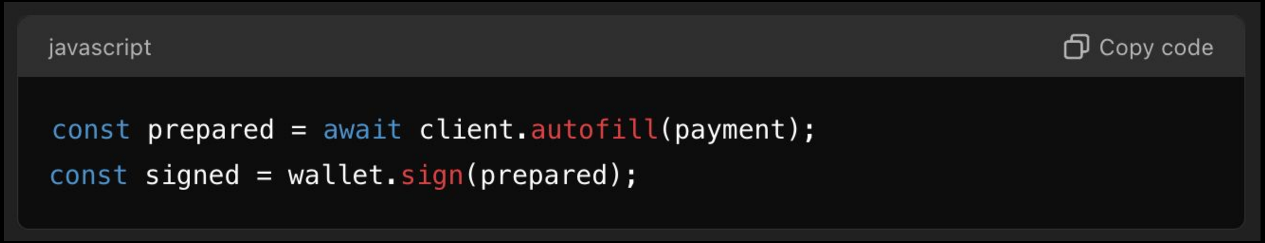
- Payment Transaction:
  - Create a message



```javascript
const payment = {
  TransactionType: 'Payment',
  Account: wallet.classicAddress,
  Destination: 'rPT1Sjq2YGrBMTttX4GZHjKu9dyfzbpAYe',
  Amount: xrpl.xrpToDrops('10')
};
```

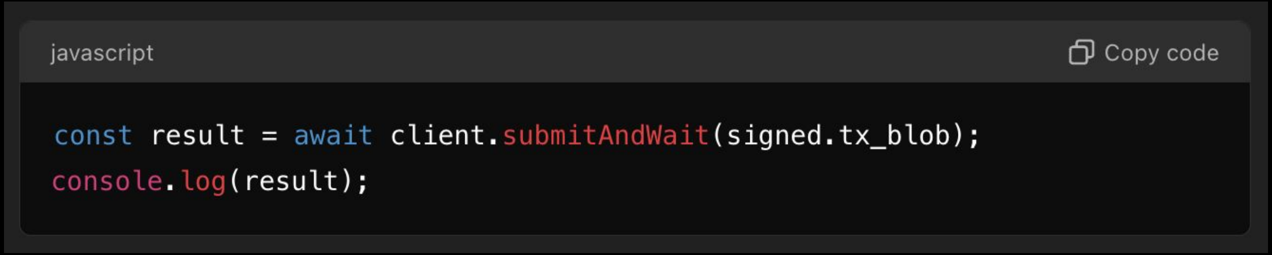
xrpl.js: Sending a Payment

- Serialization and Signing:
  - Use the library's utility functions to sign and serialize the transaction.

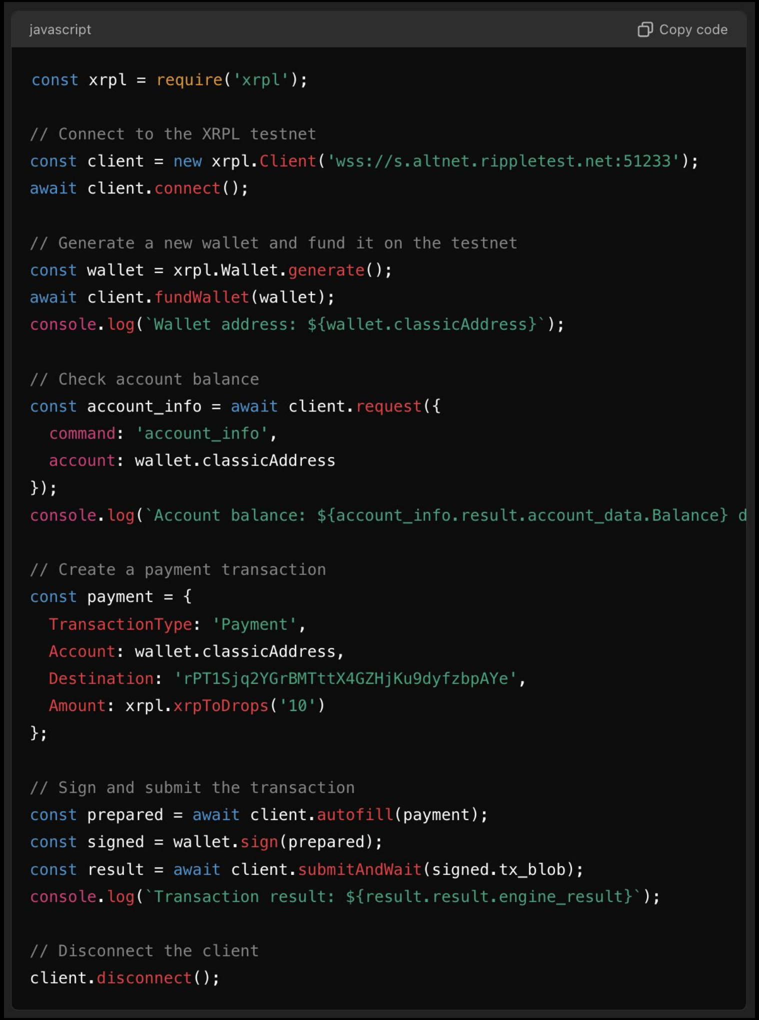


```javascript
const prepared = await client.autofill(payment);
const signed = wallet.sign(prepared);
```

- Submitting a Transaction:
  - Submit the transaction to the ledger.

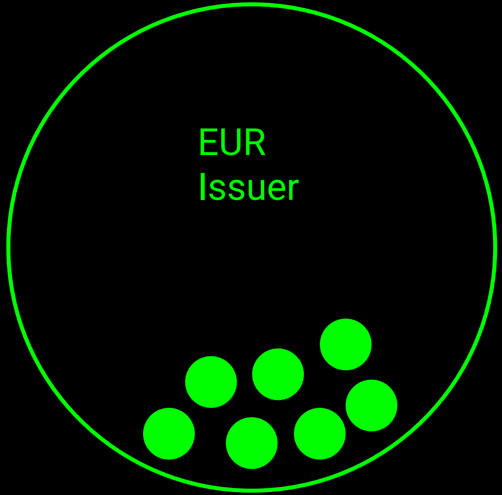


```javascript
const result = await client.submitAndWait(signed.tx_blob);
console.log(result);
```

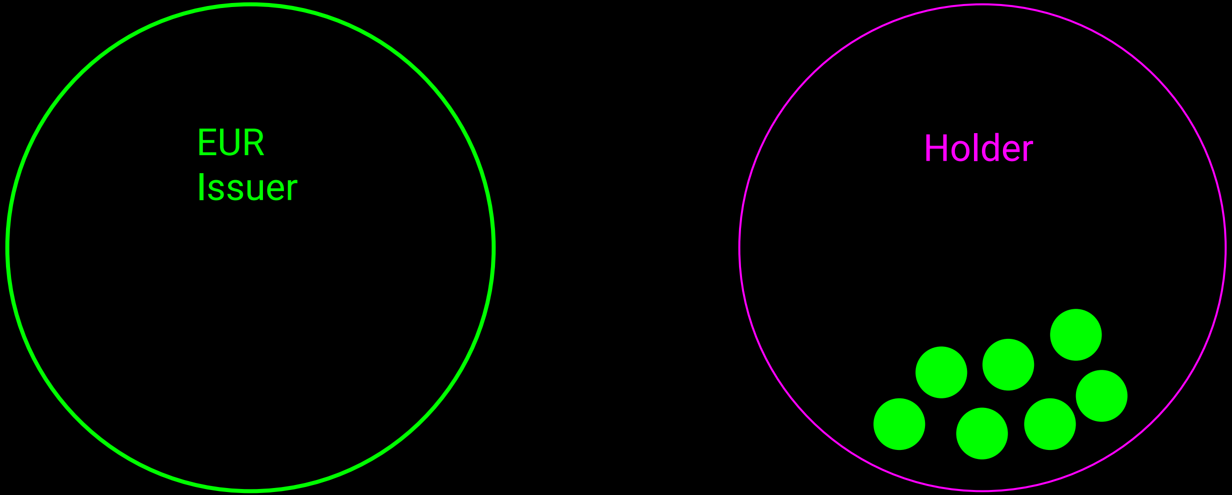


```javascript
const xrpl = require('xrpl');

// Connect to the XRPL testnet
const client = new xrpl.Client('wss://s.altnet.rippletest.net:51233');
await client.connect();

// Generate a new wallet and fund it on the testnet
const wallet = xrpl.Wallet.generate();
await client.fundWallet(wallet);
console.log(`Wallet address: ${wallet.classicAddress}`);

// Check account balance
const account_info = await client.request({
  command: 'account_info',
  account: wallet.classicAddress
});
console.log(`Account balance: ${account_info.result.account_data.Balance} d

// Create a payment transaction
const payment = {
  TransactionType: 'Payment',
  Account: wallet.classicAddress,
  Destination: 'rPT1Sjq2YGrBMTttX4GZHjKu9dyfzbpAYe',
  Amount: xrpl.xrpToDrops('10')
};

// Sign and submit the transaction
const prepared = await client.autofill(payment);
const signed = wallet.sign(prepared);
const result = await client.submitAndWait(signed.tx_blob);
console.log(`Transaction result: ${result.result.engine_result}`);

// Disconnect the client
client.disconnect();
```

Token Issuance

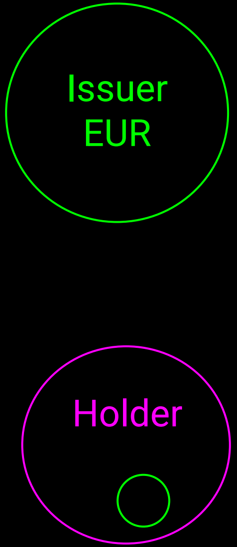


Token Issuance



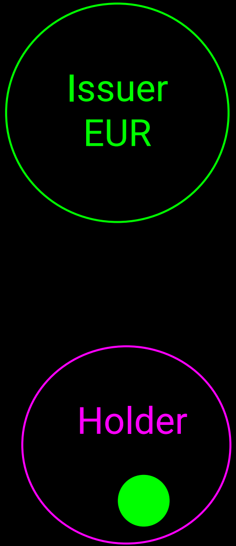
Trusting The Issuer

```
transaction = await client.submitAndWait(
{
      TransactionType: "TrustSet",
      Account: holder.classicAddress,
      LimitAmount: {
            currency: "EUR",
            issuer: issuer.classicAddress,
            value: "1000",
      },
},
{ autofill: true, wallet: holder }
);
```



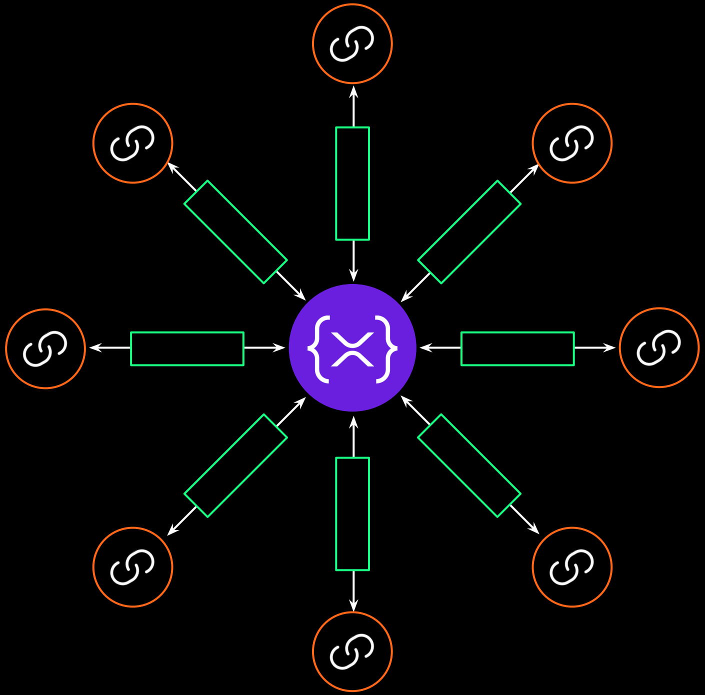
Payment to Holder

```
transaction = await client.submitAndWait(
{
      TransactionType: "Payment",
      Account: issuer.classicAddress,
      Destination: holder.classicAddress,
      Amount: {
            currency: "EUR",
            issuer: issuer.classicAddress,
            value: "1000",
      },
},
{ autofill: true, wallet: issuer }
);
```

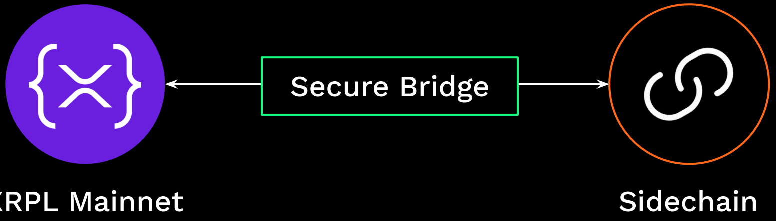


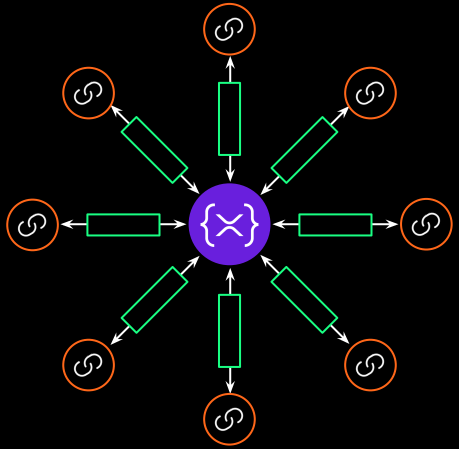
Multichain

Diversity



Sidechain





EVM Sidechain

XRPL Mainnet

Proof-of-Association Consensus

XRP Native Token

Rippled client

XRPL explorer

Example Compatible Wallets

← Secure Bridge →

EVM Sidechain

Proof-of-Authority Consensus

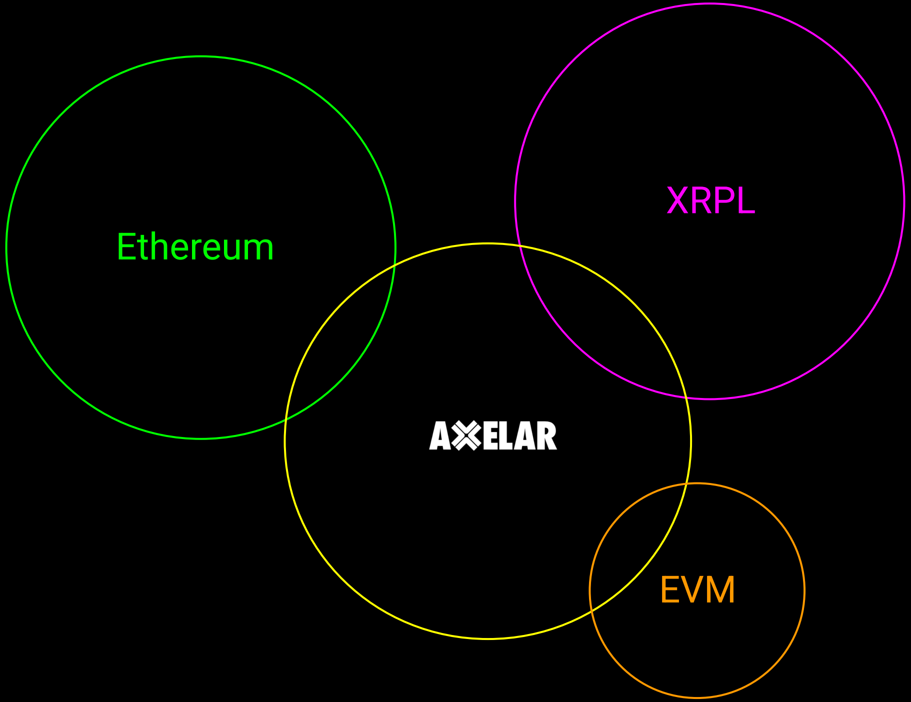
XRP Gas Token

Ethermint/Evmos client

EVM Block explorer

Example Compatible Wallets

Axelar



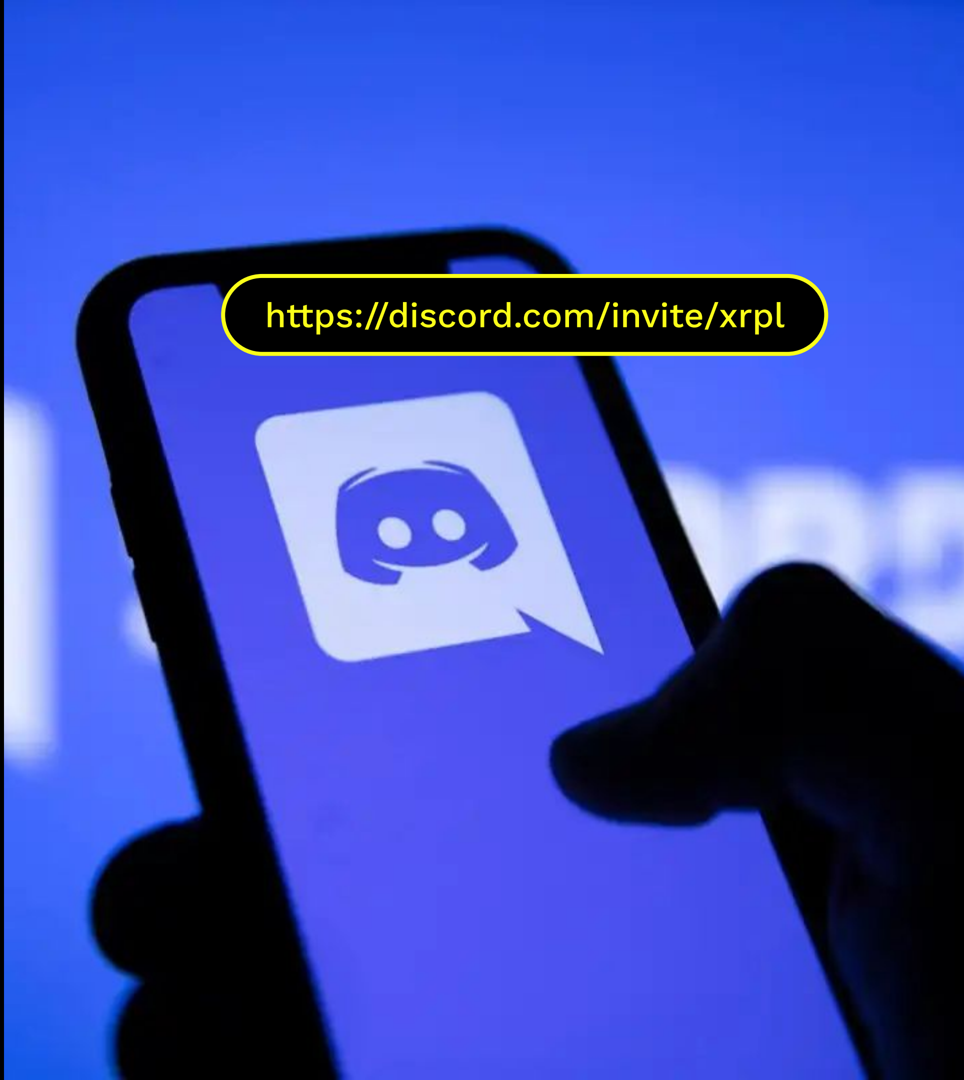
Axelar GMP

```
const paymentTx: xrpl.Transaction = {
    TransactionType: "Payment",
    Account: user.address,
    Amount: "1",
    Destination: "rfEf91bLxrTVC76vw1W3Ur8Jk4Lwujskmb",
    Memos: [
        {
            Memo: {
                MemoData: "143669292488bd98a0F14F1c73829572f2c25773",
                MemoType: Buffer.from("destination_address").toString('hex').toUpperCase(),
            },
        },
        {
            Memo: {
                MemoData: Buffer.from("ethereum").toString('hex').toUpperCase(),
                MemoType: Buffer.from("destination_chain").toString('hex').toUpperCase(),
            },
        },
        {
            Memo: {
                MemoData: "df031b281246235d0e8c8254cd731ed95d2caf4db4da67f41a71567664a1fae8",
                MemoType: Buffer.from("payload_hash").toString('hex').toUpperCase(),
            },
        },
    ],
};
```

Developer Discord:
XRP Ledger Developers

Join the conversation

- 6k+ global members
- Monthly developer "AMA" series
- Organized by community functions and technologies
- Dedicated French, Spanish, Portuguese, German, and Japanese language channels


https://discord.com/invite/xrpl

Hackathon Challenge

Criteria

- Idea (the originality of the idea)
- Implementation (the quality of the code and soundness of the architecture)
- Demo (how well you articulate your solution)
- Potential

1st place:

- Amount: $2500

- 2st place:

- Amount: $1500

https://github.com/XRPL-Commons