



AMB Query API Reference

Amazon Managed Blockchain



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Amazon Managed Blockchain: AMB Query API Reference

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Welcome

Amazon Managed Blockchain (AMB) Query provides you with convenient access to multi-blockchain network data, which makes it easier for you to extract contextual data related to blockchain activity. You can use AMB Query to read data from public blockchain networks, such as Bitcoin Mainnet and Ethereum Mainnet. You can also get information such as the current and historical balances of addresses, or you can get a list of blockchain transactions for a given time period. Additionally, you can get details of a given transaction, such as transaction events, which you can further analyze or use in business logic for your applications.

This document was last published on April 10, 2026.

Actions

The following actions are supported:

- [BatchGetTokenBalance](#)
- [GetAssetContract](#)
- [GetTokenBalance](#)
- [GetTransaction](#)
- [ListAssetContracts](#)
- [ListFilteredTransactionEvents](#)
- [ListTokenBalances](#)
- [ListTransactionEvents](#)
- [ListTransactions](#)

BatchGetTokenBalance

Gets the token balance for a batch of tokens by using the BatchGetTokenBalance action for every token in the request.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Request Syntax

```
POST /batch-get-token-balance HTTP/1.1
Content-type: application/json

{
  "getTokenBalanceInputs": [
    {
      "atBlockchainInstant": {
        "time": number
      },
      "ownerIdentifier": {
        "address": "string"
      },
      "tokenIdentifier": {
        "contractAddress": "string",
        "network": "string",
        "tokenId": "string"
      }
    }
  ]
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

getTokenBalanceInputs

An array of BatchGetTokenBalanceInputItem objects whose balance is being requested.

Type: Array of [BatchGetTokenBalanceInputItem](#) objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "errors": [
    {
      "atBlockchainInstant": {
        "time": number
      },
      "errorCode": "string",
      "errorMessage": "string",
      "errorType": "string",
      "ownerIdentifier": {
        "address": "string"
      },
      "tokenIdentifier": {
        "contractAddress": "string",
        "network": "string",
        "tokenId": "string"
      }
    }
  ],
  "tokenBalances": [
    {
      "atBlockchainInstant": {
        "time": number
      },
      "balance": "string",
      "lastUpdatedTime": {
        "time": number
      },
    }
  ]
}
```

```
    "ownerIdentifier": {
      "address": "string"
    },
    "tokenIdentifier": {
      "contractAddress": "string",
      "network": "string",
      "tokenId": "string"
    }
  }
]
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

errors

An array of `BatchGetTokenBalanceErrorItem` objects returned from the request.

Type: Array of [BatchGetTokenBalanceErrorItem](#) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

tokenBalances

An array of `BatchGetTokenBalanceOutputItem` objects returned by the response.

Type: Array of [BatchGetTokenBalanceOutputItem](#) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

[InternalServerErrorException](#)

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ResourceNotFoundException](#)

The resource was not found.

message

The container for the exception message.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

HTTP Status Code: 404

[ServiceQuotaExceededException](#)

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The resourceType of the resource that caused the exception.

serviceCode

The container for the serviceCode.

HTTP Status Code: 402

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the quotaCode.

retryAfterSeconds

The container of the retryAfterSeconds value.

serviceCode

The container for the serviceCode.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the fieldList of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetAssetContract

Gets the information about a specific contract deployed on the blockchain.

Note

- The Bitcoin blockchain networks do not support this operation.
- Metadata is currently only available for some ERC-20 contracts. Metadata will be available for additional contracts in the future.

Request Syntax

```
POST /get-asset-contract HTTP/1.1
Content-type: application/json
```

```
{
  "contractIdentifier": {
    "contractAddress": "string",
    "network": "string"
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

contractIdentifier

Contains the blockchain address and network information about the contract.

Type: [ContractIdentifier](#) object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "contractIdentifier": {
    "contractAddress": "string",
    "network": "string"
  },
  "deployerAddress": "string",
  "metadata": {
    "decimals": number,
    "name": "string",
    "symbol": "string"
  },
  "tokenStandard": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

contractIdentifier

Contains the blockchain address and network information about the contract.

Type: [ContractIdentifier](#) object

deployerAddress

The address of the deployer of contract.

Type: String

Pattern: [-A-Za-z0-9]{13,74}

metadata

The metadata of the contract.

Type: [ContractMetadata](#) object

tokenStandard

The token standard of the contract requested.

Type: String

Valid Values: ERC20 | ERC721 | ERC1155

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

InternalServerError

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

ResourceNotFoundException

The resource was not found.

message

The container for the exception message.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

HTTP Status Code: 404

ServiceQuotaExceededException

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetTokenBalance

Gets the balance of a specific token, including native tokens, for a given address (wallet or contract) on the blockchain.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Request Syntax

```
POST /get-token-balance HTTP/1.1
Content-type: application/json
```

```
{
  "atBlockchainInstant": {
    "time": number
  },
  "ownerIdentifier": {
    "address": "string"
  },
  "tokenIdentifier": {
    "contractAddress": "string",
    "network": "string",
    "tokenId": "string"
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

atBlockchainInstant

The time for when the TokenBalance is requested or the current time if a time is not provided in the request.

Note

This time will only be recorded up to the second.

Type: [BlockchainInstant](#) object

Required: No

ownerIdentifier

The container for the identifier for the owner.

Type: [OwnerIdentifier](#) object

Required: Yes

tokenIdentifier

The container for the identifier for the token, including the unique token ID and its blockchain network.

Type: [TokenIdentifier](#) object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "atBlockchainInstant": {
    "time": number
  },
  "balance": "string",
  "lastUpdatedTime": {
```

```
    "time": number
  },
  "ownerIdentifier": {
    "address": "string"
  },
  "tokenIdentifier": {
    "contractAddress": "string",
    "network": "string",
    "tokenId": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

atBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

balance

The container for the token balance.

Type: String

lastUpdatedTime

The container for time.

Type: [BlockchainInstant](#) object

ownerIdentifier

The container for the owner identifier.

Type: [OwnerIdentifier](#) object

tokenIdentifier

The container for the identifier for the token including the unique token ID and its blockchain network.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Type: [TokenIdentifier](#) object

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

[AccessDeniedException](#)

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

[InternalServerError](#)

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ResourceNotFoundException](#)

The resource was not found.

message

The container for the exception message.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

HTTP Status Code: 404

ServiceQuotaExceededException

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetTransaction

Gets the details of a transaction.

Note

This action will return transaction details for all transactions that are *confirmed* on the blockchain, even if they have not reached [finality](#).

Request Syntax

```
POST /get-transaction HTTP/1.1
Content-type: application/json

{
  "network": "string",
  "transactionHash": "string",
  "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

network

The blockchain network where the transaction occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

transactionHash

The hash of a transaction. It is generated when a transaction is created.

Type: String

Pattern: (0x[A-Fa-f0-9]{64}|[A-Fa-f0-9]{64})

Required: No

transactionId

The identifier of a Bitcoin transaction. It is generated when a transaction is created.

Note

transactionId is only supported on the Bitcoin networks.

Type: String

Pattern: (0x[A-Fa-f0-9]{64}|[A-Fa-f0-9]{64})

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "transaction": {
    "blockHash": "string",
    "blockNumber": "string",
    "confirmationStatus": "string",
    "contractAddress": "string",
    "cumulativeGasUsed": "string",
    "effectiveGasPrice": "string",
    "executionStatus": "string",
    "from": "string",
    "gasUsed": "string",
    "network": "string",
    "numberOfTransactions": number,
```

```
"signatureR": "string",
"signatureS": "string",
"signatureV": number,
"to": "string",
"transactionFee": "string",
"transactionHash": "string",
"transactionId": "string",
"transactionIndex": number,
"transactionTimestamp": number
}
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

[transaction](#)

Contains the details of the transaction.

Type: [Transaction](#) object

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

[AccessDeniedException](#)

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

[InternalServerError](#)

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ResourceNotFoundException](#)

The resource was not found.

message

The container for the exception message.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

HTTP Status Code: 404

[ServiceQuotaExceededException](#)

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

[ThrottlingException](#)

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the quotaCode.

retryAfterSeconds

The container of the retryAfterSeconds value.

serviceCode

The container for the serviceCode.

HTTP Status Code: 429

[ValidationException](#)

The resource passed is invalid.

fieldList

The container for the fieldList of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListAssetContracts

Lists all the contracts for a given contract type deployed by an address (either a contract address or a wallet address).

The Bitcoin blockchain networks do not support this operation.

Request Syntax

```
POST /list-asset-contracts HTTP/1.1
Content-type: application/json

{
  "contractFilter": {
    "deployerAddress": "string",
    "network": "string",
    "tokenStandard": "string"
  },
  "maxResults": number,
  "nextToken": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

contractFilter

Contains the filter parameter for the request.

Type: [ContractFilter](#) object

Required: Yes

maxResults

The maximum number of contracts to list.

Default: 100

Note

Even if additional results can be retrieved, the request can return less results than `maxResults` or an empty array of results.

To retrieve the next set of results, make another request with the returned `nextToken` value. The value of `nextToken` is `null` when there are no more results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Required: No

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json
```

```
{
  "contracts": [
    {
      "contractIdentifier": {
        "contractAddress": "string",
        "network": "string"
      },
      "deployerAddress": "string",
      "tokenStandard": "string"
    }
  ]
}
```

```
  ],  
  "nextToken": "string"  
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

contracts

An array of contract objects that contain the properties for each contract.

Type: Array of [AssetContract](#) objects

Array Members: Minimum number of 0 items. Maximum number of 250 items.

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

InternalServerError

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ServiceQuotaExceededException](#)

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

[ThrottlingException](#)

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

ListFilteredTransactionEvents

Lists all the transaction events for an address on the blockchain.

Note

This operation is only supported on the Bitcoin networks.

Request Syntax

```
POST /list-filtered-transaction-events HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "addressIdentifierFilter": {
    "transactionEventToAddress": [ "string" ]
  },
  "confirmationStatusFilter": {
    "include": [ "string" ]
  },
  "maxResults": number,
  "network": "string",
  "nextToken": "string",
  "sort": {
    "sortBy": "string",
    "sortOrder": "string"
  },
  "timeFilter": {
    "from": {
      "time": number
    },
    "to": {
      "time": number
    }
  },
  "voutFilter": {
    "voutSpent": boolean
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

addressIdentifierFilter

This is the unique public address on the blockchain for which the transaction events are being requested.

Type: [AddressIdentifierFilter](#) object

Required: Yes

confirmationStatusFilter

The container for the `ConfirmationStatusFilter` that filters for the *finality* of the results.

Type: [ConfirmationStatusFilter](#) object

Required: No

maxResults

The maximum number of transaction events to list.

Default: 100

Note

Even if additional results can be retrieved, the request can return less results than `maxResults` or an empty array of results.

To retrieve the next set of results, make another request with the returned `nextToken` value. The value of `nextToken` is `null` when there are no more results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

network

The blockchain network where the transaction occurred.

Valid Values: BITCOIN_MAINNET | BITCOIN_TESTNET

Type: String

Required: Yes

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Required: No

sort

The order by which the results will be sorted.

Type: [ListFilteredTransactionEventsSort](#) object

Required: No

timeFilter

This container specifies the time frame for the transaction events returned in the response.

Type: [TimeFilter](#) object

Required: No

voutFilter

This container specifies filtering attributes related to BITCOIN_VOUT event types

Type: [VoutFilter](#) object

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "events": [
    {
      "blockchainInstant": {
        "time": number
      },
      "confirmationStatus": "string",
      "contractAddress": "string",
      "eventType": "string",
      "from": "string",
      "network": "string",
      "spentVoutIndex": number,
      "spentVoutTransactionHash": "string",
      "spentVoutTransactionId": "string",
      "to": "string",
      "tokenId": "string",
      "transactionHash": "string",
      "transactionId": "string",
      "value": "string",
      "voutIndex": number,
      "voutSpent": boolean
    }
  ],
  "nextToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

events

The transaction events returned by the request.

Type: Array of [TransactionEvent](#) objects

Array Members: Minimum number of 0 items. Maximum number of 250 items.

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

InternalServerError

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

ServiceQuotaExceededException

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListTokenBalances

This action returns the following for a given blockchain network:

- Lists all token balances owned by an address (either a contract address or a wallet address).
- Lists all token balances for all tokens created by a contract.
- Lists all token balances for a given token.

Note

You must always specify the network property of the `tokenFilter` when using this operation.

Request Syntax

```
POST /list-token-balances HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "maxResults": number,
  "nextToken": "string",
  "ownerFilter": {
    "address": "string"
  },
  "tokenFilter": {
    "contractAddress": "string",
    "network": "string",
    "tokenId": "string"
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

maxResults

The maximum number of token balances to return.

Default: 100

Note

Even if additional results can be retrieved, the request can return less results than `maxResults` or an empty array of results.

To retrieve the next set of results, make another request with the returned `nextToken` value. The value of `nextToken` is `null` when there are no more results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Required: No

ownerFilter

The contract or wallet address on the blockchain network by which to filter the request. You must specify the `address` property of the `ownerFilter` when listing balances of tokens owned by the address.

Type: [OwnerFilter](#) object

Required: No

tokenFilter

The contract address or a token identifier on the blockchain network by which to filter the request. You must specify the `contractAddress` property of this container when listing tokens minted by a contract.

Note

You must always specify the network property of this container when using this operation.

Type: [TokenFilter](#) object

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "tokenBalances": [
    {
      "atBlockchainInstant": {
        "time": number
      },
      "balance": "string",
      "lastUpdatedTime": {
        "time": number
      },
      "ownerIdentifier": {
        "address": "string"
      },
      "tokenIdentifier": {
        "contractAddress": "string",
        "network": "string",
        "tokenId": "string"
      }
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

tokenBalances

An array of `TokenBalance` objects. Each object contains details about the token balance.

Type: Array of [TokenBalance](#) objects

Array Members: Minimum number of 0 items. Maximum number of 250 items.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

InternalServerError

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ServiceQuotaExceededException](#)

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the quotaCode.

resourceId

The resourceId of the resource that caused the exception.

resourceType

The resourceType of the resource that caused the exception.

serviceCode

The container for the serviceCode.

HTTP Status Code: 402

[ThrottlingException](#)

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the quotaCode.

retryAfterSeconds

The container of the retryAfterSeconds value.

serviceCode

The container for the serviceCode.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the fieldList of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListTransactionEvents

Lists all the transaction events for a transaction

Note

This action will return transaction details for all transactions that are *confirmed* on the blockchain, even if they have not reached [finality](#).

Request Syntax

```
POST /list-transaction-events HTTP/1.1
Content-type: application/json
```

```
{
  "maxResults": number,
  "network": "string",
  "nextToken": "string",
  "transactionHash": "string",
  "transactionId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

maxResults

The maximum number of transaction events to list.

Default: 100

Note

Even if additional results can be retrieved, the request can return less results than `maxResults` or an empty array of results.

To retrieve the next set of results, make another request with the returned `nextToken` value. The value of `nextToken` is `null` when there are no more results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

network

The blockchain network where the transaction events occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Required: No

transactionHash

The hash of a transaction. It is generated when a transaction is created.

Type: String

Pattern: $(0x[A-Fa-f0-9]{64} | [A-Fa-f0-9]{64})$

Required: No

transactionId

The identifier of a Bitcoin transaction. It is generated when a transaction is created.

Note

transactionId is only supported on the Bitcoin networks.

Type: String

Pattern: (0x[A-Fa-f0-9]{64}|[A-Fa-f0-9]{64})

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "events": [
    {
      "blockchainInstant": {
        "time": number
      },
      "confirmationStatus": "string",
      "contractAddress": "string",
      "eventType": "string",
      "from": "string",
      "network": "string",
      "spentVoutIndex": number,
      "spentVoutTransactionHash": "string",
      "spentVoutTransactionId": "string",
      "to": "string",
      "tokenId": "string",
      "transactionHash": "string",
      "transactionId": "string",
      "value": "string",
      "voutIndex": number,
      "voutSpent": boolean
    }
  ],
  "nextToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

events

An array of `TransactionEvent` objects. Each object contains details about the transaction events.

Type: Array of [TransactionEvent](#) objects

Array Members: Minimum number of 0 items. Maximum number of 250 items.

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

InternalServerError

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

ServiceQuotaExceededException

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListTransactions

Lists all the transaction events for a transaction.

Request Syntax

```
POST /list-transactions HTTP/1.1
Content-type: application/json
```

```
{
  "address": "string",
  "confirmationStatusFilter": {
    "include": [ "string" ]
  },
  "fromBlockchainInstant": {
    "time": number
  },
  "maxResults": number,
  "network": "string",
  "nextToken": "string",
  "sort": {
    "sortBy": "string",
    "sortOrder": "string"
  },
  "toBlockchainInstant": {
    "time": number
  }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

address

The address (either a contract or wallet), whose transactions are being requested.

Type: String

Pattern: [-A-Za-z0-9]{13,74}

Required: Yes

confirmationStatusFilter

This filter is used to include transactions in the response that haven't reached [finality](#). Transactions that have reached finality are always part of the response.

Type: [ConfirmationStatusFilter](#) object

Required: No

fromBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: No

maxResults

The maximum number of transactions to list.

Default: 100

Note

Even if additional results can be retrieved, the request can return less results than `maxResults` or an empty array of results.

To retrieve the next set of results, make another request with the returned `nextToken` value. The value of `nextToken` is `null` when there are no more results to return

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 250.

Required: No

network

The blockchain network where the transactions occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

Required: No

sort

The order by which the results will be sorted.

Type: [ListTransactionsSort](#) object

Required: No

toBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: No

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "transactions": [
    {
      "confirmationStatus": "string",
```

```
    "network": "string",
    "transactionHash": "string",
    "transactionId": "string",
    "transactionTimestamp": number
  }
]
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

nextToken

The pagination token that indicates the next set of results to retrieve.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 131070.

transactions

The array of transactions returned by the request.

Type: Array of [TransactionOutputItem](#) objects

Array Members: Minimum number of 0 items. Maximum number of 250 items.

Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

AccessDeniedException

The AWS account doesn't have access to this resource.

message

The container for the exception message.

HTTP Status Code: 403

[InternalServerErrorException](#)

The request processing has failed because of an internal error in the service.

message

The container for the exception message.

retryAfterSeconds

Specifies the `retryAfterSeconds` value.

HTTP Status Code: 500

[ServiceQuotaExceededException](#)

The service quota has been exceeded for this resource.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

resourceId

The `resourceId` of the resource that caused the exception.

resourceType

The `resourceType` of the resource that caused the exception.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 402

[ThrottlingException](#)

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

message

The container for the exception message.

quotaCode

The container for the `quotaCode`.

retryAfterSeconds

The container of the `retryAfterSeconds` value.

serviceCode

The container for the `serviceCode`.

HTTP Status Code: 429

ValidationException

The resource passed is invalid.

fieldList

The container for the `fieldList` of the exception.

message

The container for the exception message.

reason

The container for the reason for the exception

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Data Types

The Amazon Managed Blockchain Query API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AddressIdentifierFilter](#)
- [AssetContract](#)
- [BatchGetTokenBalanceErrorItem](#)
- [BatchGetTokenBalanceInputItem](#)
- [BatchGetTokenBalanceOutputItem](#)
- [BlockchainInstant](#)
- [ConfirmationStatusFilter](#)
- [ContractFilter](#)
- [ContractIdentifier](#)
- [ContractMetadata](#)
- [ListFilteredTransactionEventsSort](#)
- [ListTransactionsSort](#)
- [OwnerFilter](#)
- [OwnerIdentifier](#)
- [TimeFilter](#)
- [TokenBalance](#)
- [TokenFilter](#)
- [TokenIdentifier](#)
- [Transaction](#)
- [TransactionEvent](#)

- [TransactionOutputItem](#)
- [ValidationExceptionField](#)
- [VoutFilter](#)

AddressIdentifierFilter

This is the container for the unique public address on the blockchain.

Contents

transactionEventToAddress

The container for the recipient address of the transaction.

Type: Array of strings

Array Members: Fixed number of 1 item.

Pattern: [-A-Za-z0-9]{13,74}

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

AssetContract

This container contains information about an contract.

Contents

contractIdentifier

The container for the contract identifier containing its blockchain network and address.

Type: [ContractIdentifier](#) object

Required: Yes

deployerAddress

The address of the contract deployer.

Type: String

Pattern: [-A-Za-z0-9]{13,74}

Required: Yes

tokenStandard

The token standard of the contract.

Type: String

Valid Values: ERC20 | ERC721 | ERC1155

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BatchGetTokenBalanceErrorItem

Error generated from a failed BatchGetTokenBalance request.

Contents

errorCode

The error code associated with the error.

Type: String

Required: Yes

errorMessage

The message associated with the error.

Type: String

Required: Yes

errorType

The type of error.

Type: String

Valid Values: VALIDATION_EXCEPTION | RESOURCE_NOT_FOUND_EXCEPTION

Required: Yes

atBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: No

ownerIdentifier

The container for the owner identifier.

Type: [OwnerIdentifier](#) object

Required: No

tokenIdentifier

The container for the identifier for the token including the unique token ID and its blockchain network.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Type: [TokenIdentifier](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BatchGetTokenBalanceInputItem

The container for the input for getting a token balance.

Contents

ownerIdentifier

The container for the owner identifier.

Type: [OwnerIdentifier](#) object

Required: Yes

tokenIdentifier

The container for the identifier for the token including the unique token ID and its blockchain network.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Type: [TokenIdentifier](#) object

Required: Yes

atBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BatchGetTokenBalanceOutputItem

The container for the properties of a token balance output.

Contents

atBlockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: Yes

balance

The container for the token balance.

Type: String

Required: Yes

lastUpdatedTime

The container for time.

Type: [BlockchainInstant](#) object

Required: No

ownerIdentifier

The container for the owner identifier.

Type: [OwnerIdentifier](#) object

Required: No

tokenIdentifier

The container for the identifier for the token including the unique token ID and its blockchain network.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Type: [TokenIdentifier](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

BlockchainInstant

The container for time.

Contents

time

The container of the Timestamp of the blockchain instant.

Note

This timestamp will only be recorded up to the second.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ConfirmationStatusFilter

The container for the `ConfirmationStatusFilter` that filters for the [finality](#) of the results.

Contents

include

The container to determine whether to list results that have only reached [finality](#). Transactions that have reached finality are always part of the response.

Type: Array of strings

Array Members: Minimum number of 1 item.

Valid Values: FINAL | NONFINAL

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ContractFilter

The contract or wallet address by which to filter the request.

Contents

deployerAddress

The network address of the deployer.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: Yes

network

The blockchain network of the contract.

Type: String

Valid Values: `ETHEREUM_MAINNET` | `ETHEREUM_SEPOLIA_TESTNET` | `BITCOIN_MAINNET`
| `BITCOIN_TESTNET`

Required: Yes

tokenStandard

The container for the token standard.

Type: String

Valid Values: `ERC20` | `ERC721` | `ERC1155`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ContractIdentifier

Container for the blockchain address and network information about a contract.

Contents

contractAddress

Container for the blockchain address about a contract.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: Yes

network

The blockchain network of the contract.

Type: String

Valid Values: `ETHEREUM_MAINNET` | `ETHEREUM_SEPOLIA_TESTNET` | `BITCOIN_MAINNET`
| `BITCOIN_TESTNET`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ContractMetadata

The metadata of the contract.

Contents

decimals

The decimals used by the token contract.

Type: Integer

Required: No

name

The name of the token contract.

Type: String

Required: No

symbol

The symbol of the token contract.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ListFilteredTransactionEventsSort

Lists all the transaction events for an address on the blockchain.

Note

This operation is only supported on the Bitcoin blockchain networks.

Contents

sortBy

The container for determining how the results will be sorted.

Type: String

Valid Values: blockchainInstant

Required: No

sortOrder

The container for the *sort order* for ListFilteredTransactionEvents. The SortOrder field only accepts the values ASCENDING and DESCENDING. Not providing SortOrder will default to ASCENDING.

Type: String

Valid Values: ASCENDING | DESCENDING

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

ListTransactionsSort

The container for determining how the list transaction result will be sorted.

Contents

sortBy

Defaults to the value TRANSACTION_TIMESTAMP.

Type: String

Valid Values: TRANSACTION_TIMESTAMP

Required: No

sortOrder

The container for the *sort order* for ListTransactions. The SortOrder field only accepts the values ASCENDING and DESCENDING. Not providing SortOrder will default to ASCENDING.

Type: String

Valid Values: ASCENDING | DESCENDING

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

OwnerFilter

The container for the owner information to filter by.

Contents

address

The contract or wallet address.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

OwnerIdentifier

The container for the owner identifier.

Contents

address

The contract or wallet address for the owner.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TimeFilter

This container is used to specify a time frame.

Contents

from

The container for time.

Type: [BlockchainInstant](#) object

Required: No

to

The container for time.

Type: [BlockchainInstant](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)


TokenBalance

The balance of the token.

Contents

atBlockchainInstant

The time for when the TokenBalance is requested or the current time if a time is not provided in the request.

 **Note**

This time will only be recorded up to the second.

Type: [BlockchainInstant](#) object

Required: Yes

balance

The container of the token balance.

Type: String

Required: Yes

lastUpdatedTime

The Timestamp of the last transaction at which the balance for the token in the wallet was updated.

Type: [BlockchainInstant](#) object

Required: No

ownerIdentifier

The container for the identifier of the owner.

Type: [OwnerIdentifier](#) object

Required: No

tokenIdIdentifier

The identifier for the token, including the unique token ID and its blockchain network.

Type: [TokenIdentifier](#) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TokenFilter

The container of the token filter like the contract address on a given blockchain network or a unique token identifier on a given blockchain network.

Note

You must always specify the network property of this container when using this operation.

Contents

network

The blockchain network of the token.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

contractAddress

This is the address of the contract.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: No

tokenId

The unique identifier of the token.

Type: String

Pattern: `[a-zA-Z0-9]{1,66}`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TokenIdentifier

The container for the identifier for the token including the unique token ID and its blockchain network.

Note

Only the native tokens BTC and ETH, and the ERC-20, ERC-721, and ERC 1155 token standards are supported.

Contents

network

The blockchain network of the token.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

contractAddress

This is the token's contract address.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: No

tokenId

The unique identifier of the token.

Note

For native tokens, use the 3 character abbreviation that best matches your token. For example, `btc` for Bitcoin, `eth` for Ether, etc. For all other token types you must specify the `tokenId` in the 64 character hexadecimal `tokenId` format.

Type: String

Pattern: [a-zA-Z0-9]{1,66}

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Transaction

There are two possible types of transactions used for this data type:

- A Bitcoin transaction is a movement of BTC from one address to another.
- An Ethereum transaction refers to an action initiated by an externally owned account, which is an account managed by a human, not a contract. For example, if Bob sends Alice 1 ETH, Bob's account must be debited and Alice's must be credited. This state-changing action occurs within a transaction.

Contents

network

The blockchain network where the transaction occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

numberOfTransactions

The number of transactions in the block.

Type: Long

Required: Yes

to

The identifier of the transaction. It is generated whenever a transaction is verified and added to the blockchain.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: Yes

transactionHash

The hash of a transaction. It is generated when a transaction is created.

Type: String

Pattern: $(0x[A-Fa-f0-9]{64} | [A-Fa-f0-9]{64})$

Required: Yes

transactionIndex

The index of the transaction within a blockchain.

Type: Long

Required: Yes

transactionTimestamp

The Timestamp of the transaction.

Type: Timestamp

Required: Yes

blockHash

The block hash is a unique identifier for a block. It is a fixed-size string that is calculated by using the information in the block. The block hash is used to verify the integrity of the data in the block.

Type: String

Pattern: $(0x[A-Fa-f0-9]{64} | [A-Fa-f0-9]{64})$

Required: No

blockNumber

The block number in which the transaction is recorded.

Type: String

Required: No

confirmationStatus

Specifies whether the transaction has reached Finality.

Type: String

Valid Values: FINAL | NONFINAL

Required: No

contractAddress

The blockchain address for the contract.

Type: String

Pattern: [-A-Za-z0-9]{13,74}

Required: No

cumulativeGasUsed

The amount of gas used up to the specified point in the block.

Type: String

Required: No

effectiveGasPrice

The effective gas price.

Type: String

Required: No

executionStatus

Identifies whether the transaction has succeeded or failed.

Type: String

Valid Values: FAILED | SUCCEEDED

Required: No

from

The initiator of the transaction. It is either in the form a public key or a contract address.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: No

gasUsed

The amount of gas used for the transaction.

Type: String

Required: No

signatureR

The signature of the transaction. The X coordinate of a point R.

Type: String

Required: No

signatureS

The signature of the transaction. The Y coordinate of a point S.

Type: String

Required: No

signatureV

The signature of the transaction. The Z coordinate of a point V.

Type: Integer

Required: No

transactionFee

The transaction fee.

Type: String

Required: No

transactionId

The identifier of a Bitcoin transaction. It is generated when a transaction is created.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TransactionEvent

The container for the properties of a transaction event.

Contents

eventType

The type of transaction event.

Type: String

Valid Values: ERC20_TRANSFER | ERC20_MINT | ERC20_BURN | ERC20_DEPOSIT | ERC20_WITHDRAWAL | ERC721_TRANSFER | ERC1155_TRANSFER | BITCOIN_VIN | BITCOIN_VOUT | INTERNAL_ETH_TRANSFER | ETH_TRANSFER

Required: Yes

network

The blockchain network where the transaction occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET | BITCOIN_TESTNET

Required: Yes

transactionHash

The hash of a transaction. It is generated when a transaction is created.

Type: String

Pattern: (0x[A-Fa-f0-9]{64}|[A-Fa-f0-9]{64})

Required: Yes

blockchainInstant

The container for time.

Type: [BlockchainInstant](#) object

Required: No

confirmationStatus

This container specifies whether the transaction has reached Finality.

Type: String

Valid Values: FINAL | NONFINAL

Required: No

contractAddress

The blockchain address for the contract

Type: String

Pattern: [-A-Za-z0-9]{13,74}

Required: No

from

The wallet address initiating the transaction. It can either be a public key or a contract.

Type: String

Pattern: [-A-Za-z0-9]{13,74}

Required: No

spentVoutIndex

The position of the spent transaction output in the output list of the *creating transaction*.

Note


This is only returned for BITCOIN_VIN event types.

Type: Integer

Required: No

spentVoutTransactionHash

The transactionHash that *created* the spent transaction output.

 **Note**

This is only returned for BITCOIN_VIN event types.

Type: String

Required: No

spentVoutTransactionId

The transactionId that *created* the spent transaction output.

 **Note**

This is only returned for BITCOIN_VIN event types.

Type: String

Required: No

to

The wallet address receiving the transaction. It can either be a public key or a contract.

Type: String

Pattern: `[-A-Za-z0-9]{13,74}`

Required: No

tokenId

The unique identifier for the token involved in the transaction.

Type: String

Pattern: `[a-zA-Z0-9]{1,66}`

Required: No

transactionId

The identifier of a Bitcoin transaction. It is generated when a transaction is created.

Type: String

Required: No

value

The value that was transacted.

Type: String

Required: No

voutIndex

The position of the transaction output in the transaction output list.

Type: Integer

Required: No

voutSpent

Specifies if the transaction output is spent or unspent. This is only returned for BITCOIN_VOUT event types.

Note

This is only returned for BITCOIN_VOUT event types.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TransactionOutputItem

The container of the transaction output.

Contents

network

The blockchain network where the transaction occurred.

Type: String

Valid Values: ETHEREUM_MAINNET | ETHEREUM_SEPOLIA_TESTNET | BITCOIN_MAINNET
| BITCOIN_TESTNET

Required: Yes

transactionHash

The hash of a transaction. It is generated when a transaction is created.

Type: String

Pattern: (0x[A-Fa-f0-9]{64} | [A-Fa-f0-9]{64})

Required: Yes

transactionTimestamp

The time when the transaction occurred.

Type: Timestamp

Required: Yes

confirmationStatus

Specifies whether to list transactions that have not reached Finality.

Type: String

Valid Values: FINAL | NONFINAL

Required: No

transactionId

The identifier of a Bitcoin transaction. It is generated when a transaction is created.

Type: String

Pattern: $(0x[A-Fa-f0-9]{64} | [A-Fa-f0-9]{64})$

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ValidationExceptionField

The resource passed is invalid.

Contents

message

The ValidationException message.

Type: String

Required: Yes

name

The name of the field that triggered the ValidationException.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

VoutFilter

This container specifies filtering attributes related to BITCOIN_VOUT event types

Contents

voutSpent

Specifies if the transaction output is spent or unspent.

Type: Boolean

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Service-specific Errors

The Amazon Managed Blockchain Query API contains service-specific exceptions that various actions return. This section describes each exception in detail.

The following service-specific exceptions are returned:

- [AccessDeniedException](#)
- [InternalServerErrorException](#)
- [ResourceNotFoundException](#)
- [ServiceQuotaExceededException](#)
- [ThrottlingException](#)
- [ValidationException](#)

AccessDeniedException

The AWS account doesn't have access to this resource.

HTTP Status Code returned: 403

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

InternalServerErrorException

The request processing has failed because of an internal error in the service.

HTTP Status Code returned: 500

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Retry-After

Specifies the `retryAfterSeconds` value.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

ResourceNotFoundException

The resource was not found.

HTTP Status Code returned: 404

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

resourceId

The resourceId of the resource that caused the exception.

Type: String

Required: Yes

resourceType

The resourceType of the resource that caused the exception.

Type: String

Valid Values: collection

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

ServiceQuotaExceededException

The service quota has been exceeded for this resource.

HTTP Status Code returned: 402

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

quotaCode

The container for the quotaCode.

Type: String

Required: Yes

resourceId

The resourceId of the resource that caused the exception.

Type: String

Required: Yes

resourceType

The resourceType of the resource that caused the exception.

Type: String

Valid Values: `collection`

Required: Yes

serviceCode

The container for the `serviceCode`.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

ThrottlingException

The request or operation couldn't be performed because a service is throttling requests. The most common source of throttling errors is when you create resources that exceed your service limit for this resource type. Request a limit increase or delete unused resources, if possible.

HTTP Status Code returned: 429

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

quotaCode

The container for the quotaCode.

Type: String

Required: Yes

serviceCode

The container for the serviceCode.

Type: String

Required: Yes

Retry-After

The container of the retryAfterSeconds value.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

ValidationException

The resource passed is invalid.

HTTP Status Code returned: 400

Contents

message

The container for the exception message.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

reason

The container for the reason for the exception

Type: String

Valid Values: `unknownOperation` | `cannotParse` | `fieldValidationFailed` | `other`

Required: Yes

fieldList

The container for the `fieldList` of the exception.

Type: Array of [ValidationExceptionField](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for Ruby V3](#)

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key/YYYYMMDD/region/service/aws4_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Error Types

This section lists common error types that this AWS service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

ExpiredTokenException

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

IncompleteSignature

The request signature doesn't conform to AWS standards. Verify that you're using valid AWS credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

InternalFailure

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact AWS Support.

HTTP Status Code: 500

MalformedHttpRequestException

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

NotAuthorized

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

OptInRequired

Your AWS account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

RequestAbortedException

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

RequestEntityTooLargeException

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

RequestTimeoutException

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

ServiceUnavailable

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

ThrottlingException

Your request rate is too high. The AWS SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

UnknownOperationException

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

UnrecognizedClientException

The X.509 certificate or AWS access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

ValidationError

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400