

Protocol Messages

Native Cosmos SDK Messages

Stemming from its Cosmos SDK foundation, BandChain supports all types of messages that are native to the SDK.

BandChain Specific Messages

number of messages native to its data oracle system. These messages' specification is presented below.

MsgCreateDataSource

Deploys and registers a new data source to BandChain. Once registered, the data source is assigned a unique `int64` identifier which can be used to refer to it forever.

Parameters

Parameter	Type	Description
Sender	sdk.AccAddress	The address of the message's sender. Note that the sender does not need to be the same as the owner

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Parameter	Type	Description
Owner	sdk.AccAddress	The address of the entity who will be responsible for maintaining the data source
Name	string	The human-readable string name for this data source
Description	string	The description of this data source
Executable	[]byte	The content of executable to be run by block upon receiving a data request for this data source. The executable can be in any format, as long as it is accepted by the general

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MsgEditDataSource

Edits an existing data source given the unique `int64` identifier (i.e. `dataSourceID`). The sender must be the owner of the data source for the transaction to succeed.

Parameters

Parameter	Type	Description
DataSourceID	int64	The unique identifier number assigned to the data source when it was first registered
Sender	sdk.AccAddress	The address of the message's sender. Note that the sender does not need to



Parameter	Type	Description
Owner	sdk.AccAddress	The address of the entity who will be responsible for maintaining the data source
Name	string	The human-readable string name for this data source
Description	string	The description of this data source



Parameter	Type	Description
Executable	[]byte	The content of executable to be run by block validators upon receiving a data request for this data source. The executable can be in any format, as long as it is accepted by the general public.

MsgCreateOracleScript

Deploys a new oracle script to BandChain's network. Once registered, the script is assigned a unique `int64` identifier which can be used to refer to it forever.



Parameter	Type	Description
Sender	sdk.AccAddress	The address of the message's sender. Note that the sender does not need to be the same as the owner
Owner	sdk.AccAddress	The address of the entity who will be responsible for maintaining the data source
Name	string	The human-readable string name for this data source
Description	string	The description of this data source
Code	[]byte	The Owasm-compiled binary attached to this




Parameter	Type	Description
Schema	string	The schema detailing the inputs and outputs of this oracle script, as well as the corresponding types
Source Code URL	string	The URL for the source code of this oracle script

MsgEditOracleScript

Edits an existing oracle script given the unique `int64` identifier (i.e. `oracleScriptID`). The sender must be the owner of the oracle script for the transaction to succeed.

Parameters

Parameter	Type	Description
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Parameter	Type	Description
OracleScriptID	int64	The unique identifier number assigned to the oracle script when it was first registered on Bandchain
Sender	sdk.AccAddress	The address of the message's sender. Note that the sender does not need to be the same as the owner
Owner	sdk.AccAddress	The address of the entity who will be responsible for maintaining the data



Parameter	Type	Description
Name	string	The human-readable string name for this data source
Description	string	The description of this data source
Code	[]byte	The Owasm-compiled binary attached to this oracle script
Schema	string	The schema detailing the inputs and outputs of this oracle script, as well as the corresponding types



Parameter	Type	Description
Source Code URL	string	The URL for the source code of this oracle script

MsgRequestData

Requests a new data based on an existing oracle script. A data request will be assigned a unique identifier once the transaction is confirmed. After sufficient validators report the raw data points. The results of the data requests will be written and stored permanently on BandChain for future uses.

Parameters

Parameter	Type	Description

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Parameter	Type	Description
OracleScriptID	int64	The unique identifier number assigned to the oracle script when it was first registered on Bandchain
Sender	sdk.AccAddress	The address of the message's sender.
Calldata	string	The data passed over to the oracle script for the script to use during its execution
AskCount	int64	The number of validators that are requested to



Parameter	Type	Description
MinCount	int64	The minimum number of validators necessary for the request to proceed to the execution phase
ClientID	string	the unique identifier of this oracle request, as specified by the client. This same unique ID will be sent back to the requester with the oracle response.

MsgReportData

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request. Each data point corresponds to a data

source query issued during the data request script's execution of `prepare` function.

Parameters

Parameter	Type	Description
RequestID	int64	The unique identifier number of the particular request
Validator	sdk.ValAddress	The reporting validator's actual validator address
Reporter	sdk.AccAddress	The address the reporting validator uses to sign when submitting the report
Data	[]struct'{ externalDataId: int64, data: []byte }'	The array of raw data points. Each item corresponds to a data source query.

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MsgAddReporter

Registers an address to the list of addresses available to a validator when signing and submitting a report.

Parameters

Parameter	Type	Description
ValidatorAddress	sdk.ValAddress	The address of the validator wishing to add the reporter address to their list
ReporterAddress	sdk.AccAddress	The address to add to the validator's available addresses



Remove a previously registered address from the list of addresses available to a validator when signing and submitting a report.

Parameters

Parameter	Type	Description
ValidatorAddress	sdk.ValAddress	The address of the validator wishing to add the reporter address to their list
ReporterAddress	sdk.AccAddress	The address to remove from the validator's available addresses



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PREVIOUS



**Token
Economics**

NEXT

**Decentralized
Validator
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BAND PROTOCOL



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