

Protobuf Documentation

oracle/v1/oracle.proto

ActiveValidator

ActiveValidator is information of currently active validator

Field Type Label Description address [string](#)

Address is a validator address power [uint64](#)

Power is an amount of token that the validator is holding

DataSource

DataSource is the data structure for storing data sources in the storage.

Field Type Label Description owner [string](#)

Owner is an address of the account who own the data source name [string](#)

Name is data source name used for display description [string](#)

Description is data source description used for display filename [string](#)

Filename is string of file name used as reference for locating data source file stored in bandchain nodes treasury [string](#)

Treasury is the account address who receive data source fee from requester. fee [cosmos.base.v1beta1.Coin](#) repeated Fee is the data source fee per ask_count that data provider will receive from requester.

IBCChannel

IBCChannel is information of IBC protocol to allow communicating with other chain

Field Type Label Description port_id [string](#)

PortID is port ID used for sending response packet when request is resolved. channel_id [string](#)

ChannelID is channel ID used for sending response packet when request is resolved.

OracleRequestPacketAcknowledgement

OracleRequestPacketAcknowledgement encodes an oracle request acknowledgement send back to requester chain.

Field Type Label Description request_id [int64](#)

RequestID is BandChain's unique identifier for this oracle request.

OracleRequestPacketData

OracleRequestPacketData encodes an oracle request sent from other blockchains to BandChain.

Field Type Label Description client_id [string](#)

ClientID is 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. oracle_script_id [int64](#)

OracleScriptID is the unique identifier of the oracle script to be executed. calldata [bytes](#)

Calldata is the OBI-encoded calldata bytes available for oracle executor to read. ask_count [uint64](#)

AskCount is the number of validators that are requested to respond to this oracle request. Higher value means more security, at a higher gas cost. min_count [uint64](#)

MinCount is the minimum number of validators necessary for the request to proceed to the execution phase. Higher value means more security, at the cost of liveness. fee_limit [cosmos.base.v1beta1.Coin](#) repeated FeeLimit is the maximum tokens that will be paid to all data source providers. request_key [string](#)

RequestKey is the key from request chain to match data source fee payer on Bandchain prepare_gas [uint64](#)

PrepareGas is amount of gas to pay to prepare raw requests execute_gas [uint64](#)

ExecuteGas is amount of gas to reserve for executing

OracleResponsePacketData

OracleResponsePacketData encodes an oracle response from BandChain to the requester.

Field Type Label Description client_id [string](#)

ClientID is the unique identifier matched with that of the oracle request packet. request_id [int64](#)

RequestID is BandChain's unique identifier for this oracle request. ans_count [uint64](#)

AnsCount is the number of validators among to the asked validators that actually responded to this oracle request prior to this oracle request being resolved. request_time [int64](#)

RequestTime is the UNIX epoch time at which the request was sent to BandChain. resolve_time [int64](#)

ResolveTime is the UNIX epoch time at which the request was resolved to the final result. resolve_status [ResolveStatus](#)

ResolveStatus is the status of this oracle request, which can be OK, FAILURE, or EXPIRED. result [bytes](#)

Result is the final aggregated value encoded in OBI format. Only available if status if OK.

OracleScript

OracleScript is the data structure for storing oracle scripts in the storage.

Field Type Label Description owner [string](#)

Owner is an address of the account who own the oracle script name [string](#)

Name is oracle script name used for display description [string](#)

Description is oracle script description used for display filename [string](#)

Filename is string of file name used as reference for locating compiled oracle script WASM file stored in bandchain nodes schema [string](#)

Schema is the schema of the oracle script input/output which is formatted in OBI format e.g. "{symbol:string,multiplier:u64}/{px:u64}" source_code_url [string](#)

SourceCodeURL is the URL of oracle script's source code. It is recommended to store source code on IPFS and get its URL to preserve decentralization.

Params

Params is the data structure that keeps the parameters of the oracle module.

Field Type Label Description max_raw_request_count [uint64](#)

MaxRawRequestCount is the maximum number of data source raw requests a request can make. max_ask_count [uint64](#)

MaxAskCount is the maximum number of validators a request can target. expiration_block_count [uint64](#)

ExpirationBlockCount is the number of blocks a request stays valid before it gets expired due to insufficient reports. base_owasm_gas [uint64](#)

BaseOwasmGas is the base amount of Cosmos-SDK gas charged for owasm execution. per_validator_request_gas [uint64](#)

PerValidatorRequestGas is the amount of Cosmos-SDK gas charged per requested validator. sampling_try_count [uint64](#)

SamplingTryCount the number of validator sampling tries to pick the highest voting power subset of validators to perform an oracle task. oracle_reward_percentage [uint64](#)

OracleRewardPercentage is the percentage of block rewards allocated to active oracle validators. inactive_penalty_duration [uint64](#)

InactivePenaltyDuration is the duration period where a validator cannot activate back after missing an oracle report. ibc_request_enabled [bool](#)

IBCRequestEnabled is a flag indicating whether sending oracle request via IBC is allowed

PendingResolveList

PendingResolveList is a list of requests that are waiting to be resolved

Field Type Label Description request_ids [int64](#) repeated RequestIDs is a list of request IDs that are waiting to be resolved

PriceResult

PriceResult is a result from standard price reference

Field Type Label Description symbol [string](#)

Symbol is unit of data indicating what the data is. It is price currencies for this case. multiplier [uint64](#)

Multiplier is a number used for left-shifting value to eliminate decimal digits px [uint64](#)

Px is the actual data, which is rate number multiplied by the multiplier. request_id [int64](#)

RequestID is oracle request ID that contains this price resolve_time [int64](#)

ResolveTime is epoch timestamp indicating the time when the request had been resolved

RawReport

RawRequest is the data structure for storing raw reporter in the storage.

Field Type Label Description external_id [int64](#)

ExternalID is an ID of the raw request exit_code [uint32](#)

ExitCode is status code provided by validators to specify error, if any. Exit code is usually filled by the exit code returned from execution of specified data source script. With code 0 means there is no error. data [bytes](#)

Data is raw result provided by validators. It is usually filled by the result from execution of specified data source script.

RawRequest

RawRequest is the data structure for storing raw requests in the storage.

Field Type Label Description external_id [int64](#)

ExternalID is an ID of the raw request data_source_id [int64](#)

DataSourceID is an ID of data source script that relates to the raw request calldata [bytes](#)

Calldata is the data used as argument params for executing data source script

Report

Report is the data structure for storing reports in the storage.

Field Type Label Description validator [string](#)

Validator is a validator address who submit the report in_before_resolve [bool](#)

InBeforeResolve indicates whether the report is submitted before the request resolved raw_reports [RawReport](#) repeated RawReports is list of raw reports provided by the validator. Each raw report has different external ID

ReportersPerValidator

ReportersPerValidator is list of reporters that is associated with a validator

Field Type Label Description validator [string](#)

Validator a validator address reporters [string](#) repeated Reporters is a list of reporter account addresses associated with the validator

Request

Request is the data structure for storing requests in the storage.

Field Type Label Description oracle_script_id [int64](#)

OracleScriptID is ID of an oracle script calldata [bytes](#)

Calldata is the data used as argument params for the oracle script requested_validators [string](#) repeated
RequestedValidators is a list of validator addresses that are assigned for fulfilling the request min_count [uint64](#)

MinCount is minimum number of validators required for fulfilling the request request_height [int64](#)

RequestHeight is block height that the request has been created request_time [uint64](#)

RequestTime is timestamp of the chain's block which contains the request client_id [string](#)

ClientID is arbitrary id provided by requester. It is used by client-side for referencing the request raw_requests [RawRequest](#)
repeated RawRequests is a list of raw requests specified by execution of oracle script ibc_channel [IBCChannel](#)

IBCChannel is an IBC channel info of the other chain, which contains a channel and a port to allow bandchain connect to that chain. This field allows other chain be able to request data from bandchain via IBC. execute_gas [uint64](#)

ExecuteGas is amount of gas to reserve for executing

RequestVerification

RequestVerification is a message that is constructed and signed by a reporter to be used as a part of verification of oracle request.

Field Type Label Description chain_id [string](#)

ChainID is the ID of targeted chain validator [string](#)

Validator is an validator address request_id [int64](#)

RequestID is the targeted request ID external_id [int64](#)

ExternalID is the oracle's external ID of data source

Result

Result encodes a result of request and store in chain

Field Type Label Description client_id [string](#)

ClientID is 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. oracle_script_id [int64](#)

OracleScriptID is the unique identifier of the oracle script to be executed. calldata [bytes](#)

Calldata is the calldata bytes available for oracle executor to read. ask_count [uint64](#)

AskCount is the number of validators that are requested to respond to this oracle request. Higher value means more security, at a higher gas cost. min_count [uint64](#)

MinCount is the minimum number of validators necessary for the request to proceed to the execution phase. Higher value means more security, at the cost of liveness. request_id [int64](#)

RequestID is BandChain's unique identifier for this oracle request. ans_count [uint64](#)

AnsCount is the number of validators among to the asked validators that actually responded to this oracle request prior to this oracle request being resolved. request_time [int64](#)

RequestTime is the UNIX epoch time at which the request was sent to BandChain. resolve_time [int64](#)

ResolveTime is the UNIX epoch time at which the request was resolved to the final result. resolve_status [ResolveStatus](#)

ResolveStatus is the status of this oracle request, which can be OK, FAILURE, or EXPIRED. result [bytes](#)

Result is the final aggregated value only available if status if OK.

ValidatorStatus

ValidatorStatus maintains whether a validator is an active oracle provider.

Field Type Label Description is_active [bool](#)

IsActive is a boolean indicating active status of validator. The validator will be deactivated when they are unable to send reports to fulfill oracle request before the request expired. since [google.protobuf.Timestamp](#)

Since is a block timestamp when validator has been activated/deactivated

ResolveStatus

ResolveStatus encodes the status of an oracle request.

Name Number Description RESOLVE_STATUS_OPEN_UNSPECIFIED 0 Open - the request is not yet resolved.

RESOLVE_STATUS_SUCCESS 1 Success - the request has been resolved successfully with no errors.

RESOLVE_STATUS_FAILURE 2 Failure - an error occurred during the request's resolve call.

RESOLVE_STATUS_EXPIRED 3 Expired - the request does not get enough reports from validator within the timeframe.

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oracle/v1/query.proto

QueryActiveValidatorsRequest

QueryActiveValidatorsRequest is request type for the Query/ActiveValidators RPC method.

QueryActiveValidatorsResponse

QueryActiveValidatorsResponse is response type for the Query/ActiveValidators RPC method.

Field Type Label Description validators [ActiveValidator](#) repeated Validators is a list of active validators

QueryCountsRequest

QueryCountsRequest is request type for the Query/Count RPC method.

QueryCountsResponse

QueryCountsResponse is response type for the Query/Count RPC method.

Field Type Label Description data_source_count [int64](#)

DataSourceCount is total number of data sources available on the chain oracle_script_count [int64](#)

OracleScriptCount is total number of oracle scripts available on the chain request_count [int64](#)

RequestCount is total number of requests submitted to the chain

QueryDataRequest

QueryDataRequest is request type for the Query/Data RPC method.

Field Type Label Description data_hash [string](#)

DataHash is SHA256 hash of the file's content, which can be data source or oracle script

QueryDataResponse

QueryDataResponse is response type for the Query/Data RPC method.

Field Type Label Description data [bytes](#)

Data is file's content, which can be data source or oracle script

QueryDataSourceRequest

QueryDataSourceRequest is request type for the Query/DataSource RPC method.

Field Type Label Description data_source_id [int64](#)

DataSourceID is ID of a data source script

QueryDataSourceResponse

QueryDataSourceResponse is response type for the Query/DataSource RPC method.

Field Type Label Description data_source [DataSource](#)

DataSource is summary information of a data source

QueryOracleScriptRequest

QueryOracleScriptRequest is request type for the Query/OracleScript RPC method.

Field Type Label Description oracle_script_id [int64](#)

OracleScriptID is ID of an oracle script

QueryOracleScriptResponse

QueryOracleScriptResponse is response type for the Query/OracleScript RPC method.

Field Type Label Description oracle_script [OracleScript](#)

OracleScript is summary information of an oracle script

QueryParamsRequest

QueryParamsRequest is request type for the Query/Params RPC method.

QueryParamsResponse

QueryParamsResponse is response type for the Query/Params RPC method.

Field Type Label Description params [Params](#)

pagination defines an optional pagination for the request.

QueryPendingRequestsRequest

QueryPendingRequestRequest is request type for the Query/PendingRequests RPC method.

Field Type Label Description validator_address [string](#)

ValidatorAddress is address of a validator

QueryPendingRequestsResponse

QueryPendingRequestResponse is response type for the Query/PendingRequests RPC method.

Field Type Label Description request_ids [int64](#) repeated RequestIDs is a list of pending request IDs assigned to the given validator

QueryReportersRequest

QueryReportersRequest is request type for the Query/Reporters RPC method.

Field Type Label Description validator_address [string](#)

ValidatorAddress is a validator address

QueryReportersResponse

QueryReportersResponse is response type for the Query/Reporters RPC method.

Field Type Label Description reporter [string](#) repeated Reporter is a list of account addresses of reporters

QueryRequestPoolRequest

QueryRequestPoolRequest is request type for the Query/RequestPool RPC method.

Field Type Label Description request_key [string](#)

RequestKey is a user-generated key for each request pool port_id [string](#)

PortID is the corresponding port to the request pool channel_id [string](#)

ChannelID is the corresponding channel to the request pool

QueryRequestPoolResponse

QueryRequestPoolResponse is response type for the Query/RequestPool RPC method.

Field Type Label Description request_pool_address [string](#)

RequestPoolAddress is an address of a request pool balance [cosmos.base.v1beta1.Coin](#) repeated

QueryRequestPriceRequest

QueryRequestPriceRequest is request type for the Query/RequestPrice RPC method.

Field Type Label Description symbols [string](#) repeated Symbol is unit of data indicating what the data is ask_count [int64](#)

AskCount is number of validators allowed for fulfilling the request min_count [int64](#)

MinCount is number of validators required for fulfilling the request

QueryRequestPriceResponse

QueryRequestPriceResponse is response type for the Query/RequestPrice RPC method.

Field Type Label Description price_results [PriceResult](#) repeated PriceResult is a list of price results for given symbols

QueryRequestRequest

QueryRequestRequest is request type for the Query/Request RPC method.

Field Type Label Description request_id [int64](#)

RequestID is ID of an oracle request

QueryRequestResponse

QueryRequestResponse is response type for the Query/Request RPC method.

Field Type Label Description request [Request](#)

Request is an oracle request reports [Report](#) repeated Reports is list of result data as raw reports that are fulfilled by assigned validators result [Result](#)

Result is a final form of result data

QueryRequestSearchRequest

QueryRequestSearchRequest is request type for the Query/RequestSearch RPC method.

Field Type Label Description oracle_script_id [int64](#)

OracleScriptID is ID of an oracle script calldata [string](#)

Calldata is OBI-encoded data in hex format as argument params for the oracle script ask_count [uint64](#)

AskCount is number of validators allowed for fulfilling the request min_count [uint64](#)

MinCount is number of validators required for fulfilling the request

QueryRequestSearchResponse

QueryRequestSearchResponse is response type for the Query/RequestSearch RPC method.

Field Type Label Description request [QueryRequestResponse](#)

Request is details of an oracle request

QueryRequestVerificationRequest

QueryRequestVerificationRequest is request type for the Query/RequestVerification RPC

Field Type Label Description chain_id [string](#)

ChainID is the chain ID to identify which chain ID is used for the verification validator [string](#)

Validator is a validator address request_id [int64](#)

RequestID is oracle request ID external_id [int64](#)

ExternalID is an oracle's external ID reporter [string](#)

Reporter is an bech32-encoded public key of the reporter authorized by the validator signature [bytes](#)

Signature is a signature signed by the reporter using reporter's private key

QueryRequestVerificationResponse

QueryRequestVerificationResponse is response type for the Query/RequestVerification RPC

Field Type Label Description chain_id [string](#)

ChainID is the targeted chain ID validator [string](#)

Validator is the targeted validator address request_id [int64](#)

RequestID is the ID of targeted request external_id [int64](#)

ExternalID is the ID of targeted oracle's external data source data_source_id [int64](#)

DataSourceID is the ID of a data source that relates to the targeted external ID

QueryValidatorRequest

QueryValidatorRequest is request type for the Query/Validator RPC method.

Field Type Label Description validator_address [string](#)

ValidatorAddress is address of a validator

QueryValidatorResponse

QueryValidatorResponse is response type for the Query/Validator RPC method.

Field Type Label Description status [ValidatorStatus](#)

Status is status of a validator e.g. active/inactive

Query

Query defines the gRPC querier service.

Method Name Request Type Response Type Description Counts [QueryCountsRequest](#) [QueryCountsResponse](#) Counts queries the number of existing data sources, oracle scripts, and requests. Data [QueryDataRequest](#) [QueryDataResponse](#) Data queries content of the data source or oracle script for given SHA256 file hash. DataSource [QueryDataSourceRequest](#) [QueryDataSourceResponse](#) DataSource queries data source summary info for given data source id. OracleScript [QueryOracleScriptRequest](#) [QueryOracleScriptResponse](#) OracleScript queries oracle script summary info for given oracle script id. Request [QueryRequestRequest](#) [QueryRequestResponse](#) Request queries request info for given request id. PendingRequests [QueryPendingRequestsRequest](#) [QueryPendingRequestsResponse](#) PendingRequests queries list of pending request IDs assigned to given validator. Validator [QueryValidatorRequest](#) [QueryValidatorResponse](#) Validator queries properties of given validator address. Reporters [QueryReportersRequest](#) [QueryReportersResponse](#) Reporters queries all reporters associated with given validator address. ActiveValidators [QueryActiveValidatorsRequest](#) [QueryActiveValidatorsResponse](#) ActiveValidators queries all active oracle validators. Params [QueryParamsRequest](#) [QueryParamsResponse](#) Params queries parameters used for running bandchain network. RequestSearch [QueryRequestSearchRequest](#) [QueryRequestSearchResponse](#) RequestSearch queries the latest request that match search criteria. RequestPrice [QueryRequestPriceRequest](#) [QueryRequestPriceResponse](#) RequestPrice queries the latest price on standard price reference oracle script. RequestVerification [QueryRequestVerificationRequest](#)

[QueryRequestVerificationResponse](#) RequestVerification verifies a request to make sure that all information that will be used to report the data is valid RequestPool [QueryRequestPoolRequest](#) [QueryRequestPoolResponse](#) RequestPool queries the request pool information corresponding to the given port, channel, and request key. [Top](#)

oracle/v1/tx.proto

MsgActivate

MsgEditOracleScript is a message for activating a validator to become an oracle provider. However, the activation can be revoked once the validator is unable to provide data to fulfill requests

Field Type Label Description validator [string](#)

Validator is the validator address who sign this message and request to be activated.

MsgActivateResponse

MsgActivateResponse is response data for MsgActivate message

MsgAddReporter

MsgAddReporter is a message for adding a new reporter for a validator.

Field Type Label Description validator [string](#)

Validator is the validator address who requested to add a new reporter. Note that this is the signer. reporter [string](#)

Reporter is the account address to be added as a reporter to the validator.

MsgAddReporterResponse

MsgAddReporterResponse is response data for MsgAddReporter message

MsgCreateDataSource

MsgCreateDataSource is a message for creating a new data source.

Field Type Label Description name [string](#)

Name is the name of this data source used for display (optional). description [string](#)

Description is the description of this data source used for display (optional). executable [bytes](#)

Executable is the content of executable script or binary file to be run by validators upon execution. fee [cosmos.base.v1beta1.Coin](#) repeated Fee is the data source fee per ask_count that data provider will receive from requester. treasury [string](#)

Treasury is the account address who receive data source fee from requester. owner [string](#)

Owner is the account address who is allowed to make further changes to the data source. sender [string](#)

Sender is the signer of this message.

MsgCreateDataSourceResponse

MsgCreateDataSourceResponse is response data for MsgCreateDataSource message

MsgCreateOracleScript

MsgCreateOracleScript is a message for creating an oracle script.

Field Type Label Description name [string](#)

Name is the name of this oracle script used for display (optional). description [string](#)

Description is the description of this oracle script used for display (optional). schema [string](#)

Schema is the OBI schema of this oracle script (optional). source_code_url [string](#)

SourceCodeURL is the absolute URI to the script's source code (optional). code [bytes](#)

Code is the oracle WebAssembly binary code. Can be raw or gzip compressed. owner [string](#)

Owner is the address who is allowed to make further changes to the oracle script. sender [string](#)

Sender is the signer of this message.

MsgCreateOracleScriptResponse

MsgCreateOracleScriptResponse is response data for MsgCreateOracleScript message

MsgEditDataSource

MsgEditDataSource is a message for editing an existing data source.

Field Type Label Description data_source_id [int64](#)

DataSourceID is the unique identifier of the data source to be edited. name [string](#)

Name is the name of this data source used for display (optional). description [string](#)

Description is the description of this data source used for display (optional). executable [bytes](#)

Executable is the executable script or binary to be run by validators upon execution. fee [cosmos.base.v1beta1.Coin](#)
repeated Fee is the data source fee per ask_count that data provider will receive from requester. treasury [string](#)

Treasury is the address who receives data source fee from requester. owner [string](#)

Owner is the address who is allowed to make further changes to the data source. sender [string](#)

Sender is the signer of this message. Must be the current data source's owner.

MsgEditDataSourceResponse

MsgEditDataSourceResponse is response data for MsgEditDataSource message

MsgEditOracleScript

MsgEditOracleScript is a message for editing an existing oracle script.

Field Type Label Description oracle_script_id [int64](#)

OracleScriptID is the unique identifier of the oracle script to be edited. name [string](#)

Name is the name of this oracle script used for display (optional). description [string](#)

Description is the description of this oracle script used for display (optional). schema [string](#)

Schema is the OBI schema of this oracle script (optional). source_code_url [string](#)

SourceCodeURL is the absolute URI to the script's source code (optional). code [bytes](#)

Code is the oracle WebAssembly binary code. Can be raw or gzip compressed. owner [string](#)

Owner is an account address who is allowed to make further changes to the oracle script. sender [string](#)

Sender is an account address who signs this message. Must be the current oracle script's owner.

MsgEditOracleScriptResponse

MsgEditOracleScriptResponse is response data for MsgEditOracleScript message

MsgRemoveReporter

MsgAddReporter is a message for removing an existing reporter from a validator.

Field Type Label Description validator [string](#)

Validator is the validator address who requested to remove an existing reporter. Note that this is the signer. reporter [string](#)

Reporter is the account address to be removed from being the validator's reporter.

MsgRemoveReporterResponse

MsgRemoveReporterResponse is response data for MsgRemoveReporter message

MsgReportData

MsgReportData is a message for reporting to a data request by a validator.

Field Type Label Description request_id [int64](#)

RequestID is the identifier of the request to be reported to. raw_reports [RawReport](#) repeated RawReports is the list of report information provided by data sources identified by external ID validator [string](#)

Validator is the address of the validator that owns this report. reporter [string](#)

Reporter is the message signer who submits this report transaction for the validator.

MsgReportDataResponse

MsgReportDataResponse is response data for MsgReportData message

MsgRequestData

MsgRequestData is a message for sending a data oracle request.

Field Type Label Description oracle_script_id [int64](#)

OracleScriptID is the identifier of the oracle script to be called. calldata [bytes](#)

Calldata is the OBI-encoded call parameters for the oracle script. ask_count [uint64](#)

AskCount is the number of validators to perform the oracle task. min_count [uint64](#)

MinCount is the minimum number of validators sufficient to resolve the oracle tasks. client_id [string](#)

ClientID is the client-provided unique identifier to track the request. fee_limit [cosmos.base.v1beta1.Coin](#) repeated FeeLimit is the maximum tokens that will be paid to all data source providers. prepare_gas [uint64](#)

PrepareGas is amount of gas to pay to prepare raw requests execute_gas [uint64](#)

ExecuteGas is amount of gas to reserve for executing sender [string](#)

Sender is an account address of message sender.

MsgRequestDataResponse

MsgRequestDataResponse is response data for MsgRequestData message

Msg

Msg defines the oracle Msg service.

Method Name Request Type Response Type Description RequestData [MsgRequestData](#) [MsgRequestDataResponse](#) RequestData defines a method for submitting a new request. ReportData [MsgReportData](#) [MsgReportDataResponse](#) ReportData defines a method for reporting a data to resolve the request. CreateDataSource [MsgCreateDataSource](#) [MsgCreateDataSourceResponse](#) CreateDataSource defines a method for creating a new data source. EditDataSource [MsgEditDataSource](#) [MsgEditDataSourceResponse](#) EditDataSource defines a method for editing an existing data source. CreateOracleScript [MsgCreateOracleScript](#) [MsgCreateOracleScriptResponse](#) CreateOracleScript defines a method for creating a new oracle script. EditOracleScript [MsgEditOracleScript](#) [MsgEditOracleScriptResponse](#) EditOracleScript defines a method for editing an existing oracle script. Activate [MsgActivate](#) [MsgActivateResponse](#) Activate defines a method for applying to be an oracle validator. AddReporter [MsgAddReporter](#) [MsgAddReporterResponse](#) AddReporter defines a method for adding a new reporter for a validator. RemoveReporter [MsgRemoveReporter](#) [MsgRemoveReporterResponse](#) RemoveReporter defines a method for removing an reporter from a validator [Top](#)

oracle/v1/genesis.proto

GenesisState

GenesisState defines the oracle module's genesis state.

Field Type Label Description params [Params](#)

Params defines all the parameters of the module. data_sources [DataSource](#) repeated DataSources are data sources to be installed during genesis phase oracle_scripts [OracleScript](#) repeated OracleScripts are list of oracle scripts to be installed during genesis phase reporters [ReportersPerValidator](#) repeated Reporters are mapping between reporter's account address (key) and validator's validator address (value)

Scalar Value Types

.proto Type Notes C++ Java Python Go C# PHP Rubydouble

double double float float64 double float Floatfloat

float float float float32 float float Floatint32 Uses variable-length encoding. Inefficient for encoding negative numbers – if your field is likely to have negative values, use sint32 instead. int32 int int int32 int integer Bignum or Fixnum (as required) int64 Uses variable-length encoding. Inefficient for encoding negative numbers – if your field is likely to have negative values, use sint64 instead. int64 long int/long int64 long integer/string Bignum uint32 Uses variable-length encoding. uint32 int int/long uint32 uint integer Bignum or Fixnum (as required) uint64 Uses variable-length encoding. uint64 long int/long uint64 ulong integer/string Bignum or Fixnum (as required) sint32 Uses variable-length encoding. Signed int value. These more efficiently encode negative numbers than regular int32s. int32 int int int32 int integer Bignum or Fixnum (as required) sint64 Uses variable-length encoding. Signed int value. These more efficiently encode negative numbers than regular int64s. int64 long int/long int64 long integer/string Bignum fixed32 Always four bytes. More efficient than uint32 if values are often greater than 2^{28} . uint32 int int uint32 uint integer Bignum or Fixnum (as required) fixed64 Always eight bytes. More efficient than uint64 if values are often greater than 2^{56} . uint64 long int/long uint64 ulong integer/string Bignum sfixed32 Always four bytes. int32 int int int32 int integer Bignum or Fixnum (as required) sfixed64 Always eight bytes. int64 long int/long int64 long integer/string Bignum bool

bool boolean boolean bool bool boolean TrueClass/FalseClassstring A string must always contain UTF-8 encoded or 7-bit ASCII text. string String str/unicode string string string String (UTF-8) bytes May contain any arbitrary sequence of bytes. string ByteString str []byte ByteString string String (ASCII-8BIT) [Previous Protocol Messages](#) [Next Cosmos IBC Integration](#)