



Monero Wallet and Daemon Data Model Guideline

based on Monero Core v0.14.0.0

Draft 1 - February 22, 2019

Reference implementation: <https://github.com/monero-ecosystem/monero-javascript>

Document source: <https://github.com/monero-ecosystem/monero-javascript/blob/master/monero-model.xml>

Document source can be edited using: <https://www.draw.io/>

Daemon Data Model 1/3

MoneroBlock
header: MoneroBlockHeader
hex: string
coinbase_tx: MoneroTx
txs: list<MoneroTx>
tx_ids: list<string>

MoneroDaemonInfo
version: string
num_alt_blocks: int
block_size_limit: int
block_size_median: int
block_weight_limit: int
block_weight_median: int
bootstrap_daemon_address: string
difficulty: int
cumulative_difficulty: int
free_space: int
num_offline_peers: int
num_online_peers: int
height: int
height_without_bootstrap: int
network_type: MoneroNetworkType
is_offline: boolean
num_incoming_connections: int
num_outgoing_connections: int
num_rpc_connections: int
start_timestamp: int
target: int
target_height: int
top_block_id: string
num_txs: int
num_txs_pool: int
was_bootstrap_ever_used: boolean
database_size: int
update_available: boolean

MoneroBlockHeader
id: string
height: int
timestamp: long
size: long
weight: long
long_term_weight: int
depth: long
difficulty: long
cumulative_difficulty: long
major_version: int
minor_version: int
nonce: long
num_txs: int
orphan_status: boolean
prev_id: string
reward: BigInteger
pow_hash: string

MoneroOutput
tx: MoneroTx
key_image: MoneroKeyImage
amount: BigInteger
index: int
ring_output_indices: list<int>
stealth_public_key: string

MoneroKeyImage
hex: string
signature: string

<<enumeration>> MoneroNetworkType
mainnet: 0
testnet: 1
stagenet: 2

MoneroTx
block: MoneroBlock
height: int
id: string
version: string
is_coinbase: boolean
payment_id: string
fee: BigInteger
mixin: integer
do_not_relay: boolean
is_relayed: boolean
is_confirmed: boolean
in_tx_pool: boolean
num_confirmations: int
num_estimated_blocks_until_confirmed: int
unlock_time: int
last_relayed_timestamp: int
received_timestamp: int
is_double_spend: boolean
key: string
hex: string
pruned_hex: string
prunable_hex: string
prunable_hash: string
size: int
weight: int
vins: list<MoneroOutput>
vouts: list<MoneroOutput>
output_indices: list<int>
metadata: string
common_tx_sets: ?
extra: list<int>
rct_signatures: list<string>
rct_sig_prunable: TODO
is_kept_by_block: boolean
is_failed: boolean
last_failed_height: int

Daemon Data Model 2/3

MoneroDaemonSyncInfo
height: int
connections: list<MoneroDaemonConnection>
spans: list<MoneroDaemonConnectionSpan>
target_height: int
next_needed_pruning_seed: int
overview: ?

MoneroDaemonConnection
peer: MoneroDaemonPeer
id: string
avg_download: int
avg_upload: int
current_download: int
current_upload: int
height: int
is_incoming: boolean
live_time: long
is_local_ip: boolean
is_local_host: boolean
num_receives: int
num_sends: int
receive_idle_time: long
send_idle_time: long
state: string
num_support_flags: int

last_failed_id: string
max_used_block_height: int
max_used_block_id: string
signatures: list<string>

MoneroDaemonPeer
id: string
address: string
host: string
port: int
is_online: boolean
last_seen_timestamp: int
pruning_seed: int

MoneroBan
host: string
ip: string
is_banned: boolean
seconds: long

MoneroHardForkInfo
earliest_height: int
is_enabled: boolean
state: int
threshold: int
version: string
num_votes: int
window: int
voting: int

MoneroSubmitTxResult
is_good: boolean
is_relayed: boolean
is_double_spend: boolean
is_fee_too_low: boolean
is_mixin_too_low: boolean
has_invalid_input: boolean
has_invalid_output: boolean
is_rct: boolean
is_overspend: boolean
is_too_big: boolean
reason: string

MoneroTxPoolStats
num_txs: int
num_not_relayed: int
num_failing: int
num_double_spends: int
num_10m: int
fee_total: BigInteger
bytes_max: int
bytes_med: int
bytes_min: int
bytes_total: int
histo: ?
histo_98pc: int
oldest_timestamp: int

MoneroBlockTemplate
block_template_blob: string
block_hashing_blob: string
difficulty: long
expected_reward: BigInteger
height: int
prev_id: string
reserved_offset: int

MoneroMiningStatus
is_active: boolean
is_background: boolean
address: string
speed: int
num_threads: int

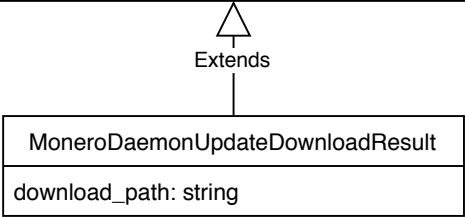
MoneroCoinbaseTxSum
emission_sum: BigInteger
fee_sum: BigInteger

Daemon Data Model 3/3

MoneroAltChain
block_ids: list<string>
difficulty: long
height: int
length: int
main_chain_parent_block_id: string

MoneroDaemonUpdateCheckResult
is_update_available: boolean
version: string
hash: string
auto_uri: string
user_uri: string

MoneroOutputHistogramEntry
amount: BigInteger
num_instances: int
num_unlocked_instances: int
num_recent_instances: int



Wallet Data Model 1/1

MoneroAccount
index: int
primary_address: string
label: string
balance: BigInteger
unlocked_balance: BigInteger
subaddresses: list<MoneroSubaddress>

MoneroAccountTag
tag: string
label: string
account_indices: list<int>

MoneroAddressBookEntry
index: int
address: string
payment_id: string
description: string

MoneroIntegratedAddress
standard_address: string
payment_id: string
integrated_address: string

MoneroSubaddress
account_index: int
index: int
address: string
label: string
balance: BigInteger
unlocked_balance: BigInteger
num_unspent_outputs: int
is_used: boolean

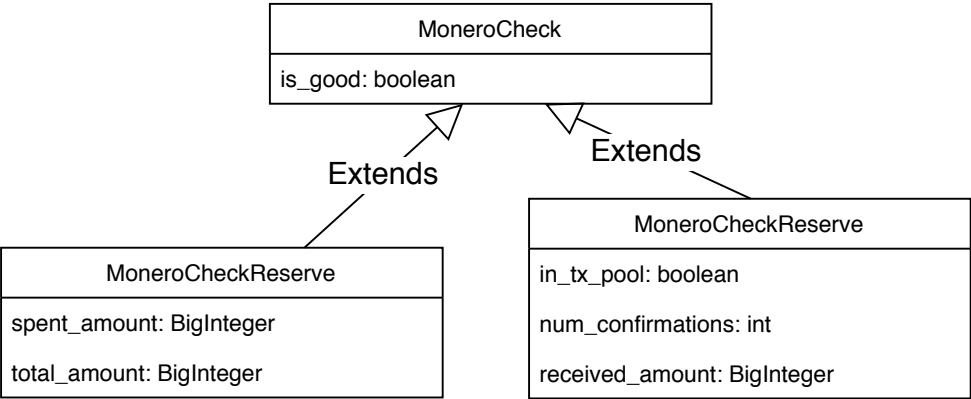
MoneroDestination
address: string
amount: BigInteger

MoneroWalletOutput extends MoneroOutput
account_index: int
subaddress_index: int
is_spent: boolean

<<enumeration>> MoneroSendPriority
default: 0
unimportant: 1
normal: 2
elevated: 3

MoneroWalletTx extends MoneroTx
incoming_amount: BigInteger
outgoing_amount: BigInteger
incoming_transfers: list<MoneroTransfer>
outgoing_transfer: MoneroTransfer
note: string

MoneroTransfer
tx: MoneroWalletTx
is_outgoing: boolean
is_incoming: boolean
address: string
account_index: int
subaddress_index: int
amount: BigInteger
destinations: list<MoneroDestination>



MoneroKeyImageImportResult
height: int
spent_amount: BigInteger
unspent_amount: BigInteger