

Special Transaction Types:

Release	Version	Туре	Payload Size	Payload	Payload JSON	Transaction Purpose
v0.13.0	3	0	n/a	n/a	n/a	Standard Transaction
v0.13.0	3	1	<variable int=""></variable>	<hex></hex>	proRegTx	Masternode Registration
v0.13.0	3	2	<variable int=""></variable>	<hex></hex>	proUpServTx	Update Masternode Service
v0.13.0	3	3	<variable int=""></variable>	<hex></hex>	proUpRegTx	Update Masternode Operator
v0.13.0	3	4	<variable int=""></variable>	<hex></hex>	proUpRevTx	Masternode Revocation
v0.13.0	3	5	<variable int=""></variable>	<hex></hex>	cbTx	Masternode List Merkle Proof
v0.13.0	3	6	<variable int=""></variable>	<hex></hex>	qcTx	Quorum Commitment

Dash v0.13.0 Integration Notes:

- 1. <u>DIP-002: Special Transactions</u> are a foundational component of Dash Core v0.13.0 and introduce a new Transaction Version and related "Payload" to the network.
- 2. Integrated Systems must be able to <u>serialize and deserialize</u> these new Transaction Types in order to accurately encode and decode Raw Transaction data.
- 3. From a <u>backwards compatibility</u> perspective, the 4 byte (32-bit) "version" field included in Legacy Transactions has been split into two fields: "version" and "type" (each consisting of 2 bytes).
- 4. Refer to the <u>Special Transactions</u> section of the dash developer reference for additional detail on these data types, e.g. <variable int>.
- 5. <u>InstantSend</u> status and Payload JSON (e.g. "proRegTx") is included in the JSON-RPC response, please note that this data is not part of the calculated hash and is provided for convenience.



Provider Registration Transaction

Feature: DIP 003: Deterministic Masternode List

Purpose: Records the registration of a Masternode on the network.

Transaction Structure:

```
{
  "txid": <string>,
  "size": <int>,
  "version": 3,
  "type": 1,
  "locktime": 0,
  "vin": [ ... ],
  "vout": [ ... ],
  "extraPayloadSize": <variable int>,
  "extraPayload": ...
}
```

Raw Transaction Hex:

JSON-RPC Response:

```
"txid": "62330c04f20acc541c8d4f3022ba2b032ea5530c476e61dc9c4235ac20d10f4f",
    "size": 469,
    "version": 3,
    "type": 1,
    "locktime": 0,
    "vin": [
        {
            "txid": "a65693797d7137a2529f438807a8c7c085d3984ceaa2f4f5230a36b536cbd326",
            "vout": 0,
            "scriptSig": {
                 "asm":
            "3045022100b025cd823cf6b746e97ale5657c1c6f150bc63530734b1c5dacef2cfad53a8ea022073d0801e18a082e
aee70838f2cfc19c78b88b879af7d3e42023d61852ad289e7[ALL]
```

0222865251150a58f0f89602cb812046cc38c84d67e3dc74edb9061aaed19c2bde",



```
"hex":
"483045022100b025cd823cf6b746e97a1e5657c1c6f150bc63530734b1c5dacef2cfad53a8ea022073d0801e18a08
2eaee70838f2cfc19c78b88b879af7d3e42023d61852ad289e701210222865251150a58f0f89602cb812046cc38c84
d67e3dc74edb9061aaed19c2bde"
     },
     "sequence": 4294967294
   }
 ],
  "vout": [
     "value": 31.42568259,
     "valueSat": 3142568259,
     "n": 0,
     "scriptPubKey": {
       "asm": "OP DUP OP HASH160 5cbfea4a74cfeb5f801f2cbaf38a9bac7ebebb0e OP EQUALVERIFY
OP CHECKSIG",
       "hex": "76a9145cbfea4a74cfeb5f801f2cbaf38a9bac7ebebb0e88ac",
       "reqSigs": 1,
       "type": "pubkeyhash",
       "addresses": [
         "yUmrvMSVw2iKVVVfarMASnBRtdfvX6MLFr"
     }
   }
  "extraPayloadSize": 274,
  "extraPayload":
0000000000ffffc38d008f4e1f8a94fb062049b841f716dcded8257a3632fb053c8273ec203d1ea62cbdb54e10618
329e4ed93e99bc9c5ab2f4cb0055ad281f9ad0808a1dda6aedf12c41c53142828879b8a94fb062049b841f716dcded
8257a3632fb053c00001976a914e4876df5735eaa10a761dca8d62a7a275349022188acbc1055e0331ea0ea63caf80
e0a7f417e50df6469a97db1f4f1d81990316a5e0b412045323bca7defef188065a6b30fb3057e4978b4f914e4e8cc0
324098ae60ff825693095b927cd9707fe10edbf8ef901fcbc63eb9a0e7cd6fed39d50a8cde1cdb4",
  "proRegTx": {
   "version": 1,
   "collateralHash": "a65693797d7137a2529f438807a8c7c085d3984ceaa2f4f5230a36b536cbd326",
   "collateralIndex": 1,
   "service": "195.141.0.143:19999",
   "keyIDOwner": "3c05fb32367a25d8dedc16f741b8492006fb948a",
   "pubKeyOperator":
"8273ec203d1ea62cbdb54e10618329e4ed93e99bc9c5ab2f4cb0055ad281f9ad0808a1dda6aedf12c41c531428288
79b",
   "keyIDVoting": "3c05fb32367a25d8dedc16f741b8492006fb948a",
   "payoutAddress": "yh9o9kPRK1s3YsuyCBe3DEjBit2RnzhgwH",
   "operatorReward": 0,
   "inputsHash": "0b5e6a319019d8f1f4b17da96964df507e417f0a0ef8ca63eaa01e33e05510bc"
  "instantlock": false
```



Provider Update Service Transaction

Feature: DIP 003: Deterministic Masternode List

Purpose: Records updates to Masternode service details (e.g. server IP address, etc).

Transaction Structure:

```
{
  "txid": <string>,
  "size": <int>,
  "version": 3,
  "type": 2,
  "locktime": 0,
  "vin": [ ... ],
  "vout": [ ... ],
  "extraPayloadSize": <variable int>,
  "extraPayload": ...
}
```

Raw Transaction Hex:

 $03000200017b1100a3e33b86b1e9948a1091648b44ac2e819850e321bbbbd9a7825cf173c8000000006a4730440220\\28f2ca816270068494686ed25ff64590c3a04f0b730d7e52e751adf640a9e4de02200379a4757738e83c24d25988c6cb\\4aed39120c985347a13e35401da41458ee0e012103a306d65010b0cb287de227a22b978973a0902174fe8bec61519d\\91183c97d9a1fefffff01e5f5b47f000000001976a914b45868066caf1c974bd7d0fb42c896cecdeccc9588ac00000000ce\\01007b1100a3e33b86b1e9948a1091648b44ac2e819850e321bbbbd9a7825cf173c8000000000000000000000ffffc38d\\8f314e1f1976a9143e1f214c329557ae3711cb173bcf04d00762f3ff88ac3f7685789f3e6480ba6ed402285da0ed9cd055\\8265603fa8bad0eec0572cf1eb1746f9c46d654879d9afd67a439d4bc2ef7c1b26de2e59897fa83242d9bd819ff46c71d9\\e3d7aa1772f4003349b777140bedebded0a42efd64baf34f59c4a79c128df711c10a45505a0c2a94a5908f1642cbb5673\\0f16b2cc2419a45890fb8ff$



```
c24d25988c6cb4aed39120c985347a13e35401da41458ee0e012103a306d65010b0cb287de227a22b978973a090217
4fe8bec61519d91183c97d9a1"
     },
      "sequence": 4294967294
    }
  ],
  "vout": [
    {
      "value": 21.42565861,
      "valueSat": 2142565861,
      "n": 0,
      "scriptPubKey": {
        "asm": "OP DUP OP HASH160 b45868066caf1c974bd7d0fb42c896cecdeccc95 OP_EQUALVERIFY
OP CHECKSIG",
        "hex": "76a914b45868066caf1c974bd7d0fb42c896cecdeccc9588ac",
        "regSigs": 1,
        "type": "pubkeyhash",
        "addresses": [
          "ycm2PK88JoLumDfztYdCbwfM1PnvE3qBGf"
        1
      }
    }
  ],
  "extraPayloadSize": 206,
  "extraPayload":
"01007b1100a3e33b86b1e9948a1091648b44ac2e819850e321bbbbd9a7825cf173c8000000000000000000ffffc
38d8f314e1f1976a9143e1f214c329557ae3711cb173bcf04d00762f3ff88ac3f7685789f3e6480ba6ed402285da0e
d9cd0558265603fa8bad0eec0572cf1eb1746f9c46d654879d9afd67a439d4bc2ef7c1b26de2e59897fa83242d9bd8
19 \\ ff46 \\ c71 \\ d9e3 \\ d7aa1772 \\ f4003349 \\ b777140 \\ bedebded0a42 \\ efd64 \\ baf34f59 \\ c4a79 \\ c128 \\ df711 \\ c10a45505 \\ a0c2a94a59
08f1642cbb56730f16b2cc2419a45890fb8ff",
  "proUpServTx": {
    "version": 1,
   "proTxHash": "c873f15c82a7d9bbbb21e35098812eac448b6491108a94e9b1863be3a300117b",
    "service": "195.141.143.49:19999",
    "operatorPayoutAddress": "yRyv33x1PzwSTW3B2DV3XXRyr7Z5M2P4V7",
   "inputsHash": "ebf12c57c0eed0baa83f60658255d09ceda05d2802d46eba80643e9f7885763f"
  "instantlock": false
```



Provider Update Registrar Transaction

Feature: DIP 003: Deterministic Masternode List

Purpose: Records updates to Masternode operator details (e.g. voting key, etc).

Transaction Structure:

```
"txid": <string>,
    "size": <int>,
    "version": 3,
    "type": 3,
    "locktime": 0,
    "vin": [ ... ],
    "vout": [ ... ],
    "extraPayloadSize": <variable int>,
    "extraPayload": ...
}
```

Raw Transaction Hex:

03000300014f0fd120ac35429cdc616e470c53a52e032bba22304f8d1c54cc0af2040c3362000000006b483045022100 dd412692cfc23f6b4e8853e5db29f314d9d309c4c6caa4be8bd325f74def1ad4022038eda085b8e13420e4d849e21830 7c97bf0873819d52968325e8f17500d534580121025f4156984bd7f24c63e63caae7b3e3ae0afb008258b9446bdc97fbd 3316de3f5feffffff0194c74fbb000000001976a9140b6def979ca5d7ae8b7319d421736cab851dc7de88ac00000000e401 004f0fd120ac35429cdc616e470c53a52e032bba22304f8d1c54cc0af2040c3362000018ece819b998a36a185e323a87 49e55fd3dc2e259b741f8580fbd68cbd9f51d30f4d4da34fd5afc71859dca3cf10fbda8a94fb062049b841f716dcded8257a 3632fb053c1976a914f25c59be48ee1c4fd3733ecf56f440659f1d6c5088acb309a51267451a7f52e79ef2391aa952e9a0 284e8fd8db56cdcae3b49b7e6dab4120c838c08b9492c5039444cac11e466df3609c585010fab636de75c687bab9f615 4d9a7c26d7b5384a147fc67ddb2e66e5f773af73dbf818109aec692ed364eafd



420e4d849e218307c97bf0873819d52968325e8f17500d534580121025f4156984bd7f24c63e63caae7b3e3ae0afb0 08258b9446bdc97fbd3316de3f5" }, "sequence": 4294967294 }], "vout": [{ "value": 31.42567828, "valueSat": 3142567828, "n": 0, "scriptPubKey": { "asm": "OP DUP OP HASH160 0b6def979ca5d7ae8b7319d421736cab851dc7de OP_EQUALVERIFY OP CHECKSIG", "hex": "76a9140b6def979ca5d7ae8b7319d421736cab851dc7de88ac", "regSigs": 1, "type": "pubkeyhash", "addresses": ["yMMsyo13PTnRPqW1But5dzn9uGSZtcPjhj" 1 } }], "extraPayloadSize": 228, "extraPayload": "01004f0fd120ac35429cdc616e470c53a52e032bba22304f8d1c54cc0af2040c3362000018ece819b998a36a185e3 23a8749e55fd3dc2e259b741f8580fbd68cbd9f51d30f4d4da34fd5afc71859dca3cf10fbda8a94fb062049b841f71 6dcded8257a3632fb053c1976a914f25c59be48ee1c4fd3733ecf56f440659f1d6c5088acb309a51267451a7f52e79 ef2391aa952e9a0284e8fd8db56cdcae3b49b7e6dab4120c838c08b9492c5039444cac11e466df3609c585010fab63 6de75c687bab9f6154d9a7c26d7b5384a147fc67ddb2e66e5f773af73dbf818109aec692ed364eafd", "proUpRegTx": { "version": 1, "proTxHash": "62330c04f20acc541c8d4f3022ba2b032ea5530c476e61dc9c4235ac20d10f4f", "pubKeyOperator": "18ece819b998a36a185e323a8749e55fd3dc2e259b741f8580fbd68cbd9f51d30f4d4da34fd5afc71859dca3cf10f bda", "keyIDVoting": "3c05fb32367a25d8dedc16f741b8492006fb948a", "payoutAddress": "yiQw1FmRannHeZYrjA1iGD2vQniqjqGENc", "inputsHash": "ab6d7e9bb4e3cacd56dbd88f4e28a0e952a91a39f29ee7527f1a456712a509b3" "instantlock": false



Provider Update Revocation Transaction

Feature: DIP 003: Deterministic Masternode List

Purpose: Records the removal of a Masternode from the network.

Transaction Structure:

```
{
  "txid": <string>,
  "size": <int>,
  "version": 3,
  "type": 4,
  "locktime": 0,
  "vin": [ ... ],
  "vout": [ ... ],
  "extraPayloadSize": <variable int>,
  "extraPayload": ...
}
```

Raw Transaction Hex:

03000400016f8a813df204873df003d6efc44e1906eaf6180a762513b1c91252826ce05916000000006b483045022100 9b50474beacd48b37340eb5715a5ebd92239e54595147b5c55018bc29f26bde302203f312cdd8009f3f03b9bb9a00074 361974a40f5f5fafaf16ba4378cb72adcc4201210250a5b41488dec3d4116ae5733d18d03326050aebc3958118d64773 9ad1a5de24fefffff01b974ed6d000000001976a914f0ae84a7ea8a0efd48c155eeeaaed6eb64c2812188ac000000000a4 01006f8a813df204873df003d6efc44e1906eaf6180a762513b1c91252826ce05916010082cf248cf6b8ac6a3cdc826eda e582ead20421659ed891f9d4953a540616fb4f05279584b3339ed2ba95711ad28b18ee2878c4a904f76ea4d103e1d739 f22ff7e3b9b3db7d0c4a7e120abb4952c3574a18de34fa29828f9fe3f52bd0b1fac17acd04f7751967d782045ab6550536 53438f1dd1e14ba6adeb8351b78c9eb59bf4



3f03b9bb9a00074361974a40f5f5fafaf16ba4378cb72adcc4201210250a5b41488dec3d4116ae5733d18d03326050 aebc3958118d647739ad1a5de24" }, "sequence": 4294967294 }], "vout": [{ "value": 18.44278457, "valueSat": 1844278457, "n": 0, "scriptPubKey": { "asm": "OP DUP OP HASH160 f0ae84a7ea8a0efd48c155eeeaaed6eb64c28121 OP EQUALVERIFY OP CHECKSIG", "hex": "76a914f0ae84a7ea8a0efd48c155eeeaaed6eb64c2812188ac", "reqSiqs": 1, "type": "pubkeyhash", "addresses": ["yiG45yiCksvpd1iLU5o3Dsj8GYRsWvGchu" 1 } }], "extraPayloadSize": 164, "extraPayload": "01006f8a813df204873df003d6efc44e1906eaf6180a762513b1c91252826ce05916010082cf248cf6b8ac6a3cdc8 26edae582ead20421659ed891f9d4953a540616fb4f05279584b3339ed2ba95711ad28b18ee2878c4a904f76ea4d10 3e1d739f22ff7e3b9b3db7d0c4a7e120abb4952c3574a18de34fa29828f9fe3f52bd0b1fac17acd04f7751967d7820 45ab655053653438f1dd1e14ba6adeb8351b78c9eb59bf4", "proUpRevTx": { "version": 1, "proTxHash": "1659e06c825212c9b11325760a18f6ea06194ec4efd603f03d8704f23d818a6f", "reason": 1, "inputsHash": "4ffb1606543a95d4f991d89e652104d2ea82e5da6e82dc3c6aacb8f68c24cf82" },

"instantlock": false



Coinbase Transaction

Feature: <u>DIP 004: Simplified Verification of Deterministic Masternode Lists</u>

Purpose: Records a Merkle Proof of the current Masternode List.

Transaction Structure:

```
{
  "txid": <string>,
  "size": <int>,
  "version": 3,
  "type": 5,
  "locktime": 0,
  "vin": [ ... ],
  "vout": [ ... ],
  "extraPayloadSize": <variable int>,
  "extraPayload": ...
}
```

Raw Transaction Hex:

```
"txid": "13c97f347a78eb3c200e224d074207043e419feef46a447b4065add9da90068d",
  "size": 261,
  "version": 3,
  "type": 5,
  "locktime": 0,
  "vin": [
     "coinbase": "027d1b0e2f5032506f6f6c2d74444153482f",
     "sequence": 4294967295
 ],
  "vout": [
     "value": 68.17518851,
     "valueSat": 6817518851,
     "n": 0,
     "scriptPubKey": {
       "asm": "OP DUP OP HASH160 4f79c383bc5d3e9d4d81b98f87337cedfa789536 OP EQUALVERIFY
OP CHECKSIG",
```



```
"hex": "76a9144f79c383bc5d3e9d4d81b98f87337cedfa78953688ac",
        "reqSigs": 1,
        "type": "pubkeyhash",
        "addresses": [
          "yTZg6eePKxbJZyoaC93bVrTUq5vjhFrbst"
      }
    },
      "value": 68.85000000,
      "valueSat": 6885000000,
      "n": 1,
      "scriptPubKey": {
       "asm": "OP DUP OP HASH160 255c0d7c93c12c801140d4e3287d2f40d4ff42dd OP EQUALVERIFY
OP CHECKSIG",
        "hex": "76a914255c0d7c93c12c801140d4e3287d2f40d4ff42dd88ac",
        "reqSigs": 1,
        "type": "pubkeyhash",
        "addresses": [
          "yPiz8EUxbmddJ8x2bvpqytQpVRfu5CL4xQ"
      }
    },
      "value": 0.67481149,
      "valueSat": 67481149,
      "n": 2,
      "scriptPubKey": {
       "asm": "OP DUP OP HASH160 badadfdebaa6d015a0299f23fbc1fcbdd72ba96f OP EQUALVERIFY
        "hex": "76a914badadfdebaa6d015a0299f23fbc1fcbdd72ba96f88ac",
        "reqSigs": 1,
        "type": "pubkeyhash",
        "addresses": [
          "ydMSjYqwv4xTossPJ1xndTxwS1Hho9DmuM"
      }
    },
      "value": 0.00000000,
     "valueSat": 0,
      "n": 3,
      "scriptPubKey": {
       "asm": "OP RETURN
83bdbfb92d3848bca649767bf4f1f2994a66026a938d896348664703e730bbce0000000001000000",
"6a2883bdbfb92d3848bca649767bf4f1f2994a66026a938d896348664703e730bbce000000001000000",
       "type": "nulldata"
      }
```





Quorum Commitment

Feature: DIP 002: Special Transactions

Feature: <u>DIP 006: Long Living Masternode Quorums</u>

Purpose: Records blockchain-verifiable details of a LLMQ session.

Transaction Structure:

```
{
  "txid": <string>,
  "size": <int>,
  "version": 3,
  "type": 6,
  "locktime": 0,
  "vin": [],
  "vout": [],
  "extraPayloadSize": <variable int>,
  "extraPayload": ...
}
```

Raw Transaction Hex:

JSON-RPC Response:

