

Staking and lifting documentation

This document describes the staking and lift/lower endpoint we will be implementing in the gateway. This document **is not** the final version.

proxyStakeAvt

Stakes the specified amount of AVT, locking its free usage in order to earn rewards.

Note This should only be used for *first time* stakers - please query `getStakingStatus` to check first.

Note-2 The initial staking requires 2 sets of proofs, one to cover the bonding step and one to cover the nominating step

REQUEST

POST `https://AVN-API-URL/send`

HEADERS

`Content-Type: application/json`

`Authorization': bearer <awtToken>`

REQUEST PARAMS

- `relayer` *[required]* - a string representing the relayer's SS58 address
- `signer` *[required]* - a string representing the sender's SS58 address
- `amount` *[required]* - a string integer value representing the full amount of AVT to stake
- `targets` *[required]* - The list of validators to nominate
- `proxyBondSignature` *[required]* - a proof signed by the sender/signer account allowing the bond transaction to be proxied
- `proxyNominateSignature` *[required]* - a proof signed by the sender/signer account allowing the nominate transaction to be proxied
- `bondFeePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the bond relayer fees to be paid
- `nominateFeePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the nominate relayer fees to be paid
- `bondPaymentNonce` *[required]* - string integer value of the current account payment nonce \

EXAMPLE

```
## JSON-RPC over HTTPS POST
curl https://AVN-API-URL/send \
  -X POST \
  -H "Content-Type: application/json" \
  -H "Authorization: bearer <awtToken>" \
  -d '{"jsonrpc":"2.0", "method":"proxyStakeAvt",
"params":{"relayer":"5FbUQ2kJWLoqHuSTSNNqBwKwdQnBVe4HF3TeGyu6UoZaryTh",
"signer":"5DAGxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDDdMr",
"amount":"0x899697fff9eccfb4de41ad689334751f28a7b5c026e9cf23c4e8ddec11dcf35",
```

```
"proxyBondSignature": "0x8cd139e3ac19d8fe217574c138ca320a73041b15527ba220280117588ad3597c20788049b4fbb6df2d96e579af68d6643c1cd4234812f8c9adb0e102a5840145",
```

```
"proxyNominateSignature": "0x4bd139e3ac19d8fe217574c138ca320a73041b15527ba220280117588ad3597c20788049b4fbb6df2d96e579af68d6643c1cd4234812f8c9adb0e102a5840145",
```

```
"bondFeePaymentSignature": "0x243ad5e9df7e5443b29de409e5668753aea836b97d73af3b491c018d11a1269ef091f712b27e75847f8e5d056a996b4186d0ee80b3eb05ef0d1991c05539b0c8", "nominateFeePaymentSignature": "0x123ad5e9df7e5443b29de409e5668753aea836b97d73af3b491c018d11a1269ef091f712b27e75847f8e5d056a996b4186d0ee80b3eb05ef0d1991c05539b0c8", "bondPaymentNonce": "305", "targets": ["0x", "0x", "0x"]}, "id": 1}'
```

RESULT FIELDS

VALUE - a request ID that can be queried for the transaction's status

BODY

```
{
  "jsonrpc": "2.0",
  "id": 1,
  "result": "80ada166-e4f7-441d-9f1d-1be266a2f89c"
}
```

proxyIncreaseStake

Stakes the specified amount of AVT, locking its free usage in order to earn rewards. **Note** This should only be used for *existing* stakers - please query `getStakingStatus` to check first.

REQUEST

POST `https://AVN-API-URL/send`

HEADERS

Content-Type: `application/json`

Authorization': `bearer <awtToken>`

REQUEST PARAMS

- `relayer` *[required]* - a string representing the relayer's SS58 address
- `signer` *[required]* - a string representing the sender's SS58 address
- `amount` *[required]* - a string integer value representing the full amount of AVT to stake
- `proxySignature` *[required]* - a proof signed by the sender/signer account allowing the transaction to be proxied
- `feePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the relayer fees to be paid
- `paymentNonce` *[required]* - string integer value of the current account payment nonce

EXAMPLE

```
## JSON-RPC over HTTPS POST
curl https://AVN-API-URL/send \
```

```
-X POST \  
-H "Content-Type: application/json" \  
-H "Authorization: bearer <awtToken>" \  
-d '{"jsonrpc":"2.0", "method":"proxyStakeAvt",  
"params":{"relayer":"5FbUQ2kJWLoqHuSTSNnqBwKwdQnBVe4HF3TeGyu6UoZaryTh",  
"signer":"5DAgxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDdMr",  
"amount":"0x899697fff9eccfb4de41ad689334751f28a7b5c026e9cf23c4e8ddec11  
dcf35",  
"proxySignature":"0x4bd139e3ac19d8fe217574c138ca320a73041b15527ba220280  
117588ad3597c20788049b4fbb6df2d96e579af68d6643c1cd4234812f8c9adb0e102a5  
840145",  
"feePaymentSignature":"0x123ad5e9df7e5443b29de409e5668753aea836b97d73af  
3b491c018d11a1269ef091f712b27e75847f8e5d056a996b4186d0ee80b3eb05ef0d199  
1c05539b0c8", "paymentNonce":"305"}', "id":1}'
```

RESULT FIELDS

VALUE - a request ID that can be queried for the transaction's status

BODY

```
{  
  "jsonrpc": "2.0",  
  "id": 1,  
  "result": "80ada166-e4f7-441d-9f1d-1be266a2f89c"  
}
```

proxyUnstakeAvt

Unstakes the specified amount of AVT, removing it from earning further staking rewards and (after a period) allowing it to be withdrawn back to the free balance

REQUEST

POST <https://AVN-API-URL/send>

HEADERS

Content-Type: application/json

Authorization: bearer <awtToken>

REQUEST PARAMS

- `relayer` *[required]* - a string representing the relayer's SS58 address
- `signer` *[required]* - a string representing the sender's SS58 address
- `amount` *[required]* - a string integer value representing the full amount of AVT to unstake
- `proxySignature` *[required]* - a proof signed by the sender/signer account allowing the transaction to be proxied
- `feePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the relayer fees to be paid
- `paymentNonce` *[required]* - string integer value of the current account payment nonce

EXAMPLE

```
## JSON-RPC over HTTPS POST
```

```
curl https://AVN-API-URL/send \  
  -X POST \  
  -H "Content-Type: application/json" \  
  -H "Authorization: bearer <awtToken>" \  
  -d '{"jsonrpc":"2.0", "method":"proxyUnstakeAvt",  
"params":{"relayer":"5FbUQ2kJWLoqHuSTSNnqBwKwdQnBVe4HF3TeGyu6UoZaryTh",  
"signer":"5DAgxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDdMr",  
"amount":"0x899697fff9eccfb4de41ad689334751f28a7b5c026e9cf23c4e8ddec11  
dcf35",  
"proxySignature":"0x642e2bf73020f8bbdee84543fe696fd0fcfa0792702afd47b33  
dce5f0d986747dc75f255bc1e7881a90dd146ce0a1344316a5923deff2ee6b2ea867cdb  
fb2865",  
"feePaymentSignature":"0xbab9b458e835338e73b6d2ae1f33b1bcb34e3743f286c0  
adf9c49f23e0c9be1d5ae9e43a93ba1eb7af76f924e92e7693a6b4ab299299e02e6fc63  
88e89989bcf", "paymentNonce":"312"}, "id":1}'
```

RESULT FIELDS

VALUE - a request ID that can be queried for the transaction's status

BODY

```
{  
  "jsonrpc": "2.0",  
  "id": 1,  
  "result": "d52f3574-61b3-4bf6-b340-0d0ad05eee4b"  
}
```

getAccountInfo

Returns a breakdown of the current AVT utilisation in a given AvN account

REQUEST

```
POST https://AVN-API-URL/query
```

HEADERS

```
Content-Type: application/json Authorization: bearer <awtToken>
```

REQUEST PARAMS

- `accountId` *[required]* - a string representing the public key or SS58 address of the account to check

EXAMPLE

```
## JSON-RPC over HTTPS POST  
curl https://AVN-API-URL/query \  
  -X POST \  
  -H "Content-Type: application/json" \  
  -H "Authorization: bearer <awtToken>" \  
  -d '{"jsonrpc":"2.0", "method":"getAccountInfo",  
"params":{"accountId":"5GLVUNb9oKLesAjDt17X1N49xyp2fr62sKPAKLgmmNbDB9MH  
"}, "id":1}'
```

RESULT FIELDS

- `totalBalance` - string integer value representing the account's total AVT balance
- `freeBalance` - string integer value representing the portion of the total that is freely usable (not staked or locked)
- `stakedBalance` - string integer value representing the portion that is staked and currently earning rewards
- `unlockedBalance` - string integer value representing the portion that is unstaked and unlocked and can be converted to free balance
- `unstakedBalance` - string integer value representing the portion that is unstaked but still currently locked \

BODY

```
{
  "jsonrpc": "2.0",
  "id": 1,
  "result": {
    "totalBalance": "10000000000000000",
    "freeBalance": "5000000000000000",
    "stakedBalance": "2000000000000000",
    "unlockedBalance": "1000000000000000",
    "unstakedBalance": "2000000000000000"
  }
}
```

getStakingStatus

Returns the staking status of the given AvN account

REQUEST

POST `https://AVN-API-URL/query`

HEADERS

Content-Type: application/json Authorization': bearer <awtToken>

REQUEST PARAMS

- `accountId` [*required*] - a string representing the public key or SS58 address of the account to check \

EXAMPLE

```
## JSON-RPC over HTTPS POST
curl https://AVN-API-URL/query \
  -X POST \
  -H "Content-Type: application/json" \
  -H "Authorization: bearer <awtToken>" \
  -d '{"jsonrpc":"2.0", "method":"getStakingStatus",
"params":{"accountId":"5DAgxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDDMr"}, "id":1}'
```

RESULT FIELDS

VALUE - string detailing the current staking status:

```
'isStaking'  
'isNotStaking'
```

BODY

```
{  
  "jsonrpc": "2.0",  
  "id": 1,  
  "result": "isNotStaking"  
}
```

getValidatorsToNominate

Returns the validator nomination list required to create first-time staker proofs

REQUEST

POST <https://AVN-API-URL/query>

HEADERS

Content-Type: application/json Authorization': bearer <awtToken>

EXAMPLE

```
## JSON-RPC over HTTPS POST  
curl https://AVN-API-URL/query \  
  -X POST \  
  -H "Content-Type: application/json" \  
  -H "Authorization: bearer <awtToken>" \  
  -d '{"jsonrpc":"2.0", "method":"getValidatorsToNominate",  
"params":{}, "id":1}'
```

RESULT FIELDS

VALUE - array of hex strings representing the list of validator public keys

BODY

```
{  
  "jsonrpc": "2.0",  
  "id": 1,  
  "result": ["0x", "0x", "0x"]  
}
```

proxyConfirmTokenLift

Trigger the AvN confirmation of a lift operation that has previously occurred on Ethereum

REQUEST

POST `https://AVN-API-URL/send`

HEADERS

Content-Type: `application/json`

Authorization: `bearer <awtToken>`

REQUEST PARAMS

- `relayer` *[required]* - a string representing the relayer's SS58 address
- `signer` *[required]* - a string representing the sender's SS58 address
- `ethereumTransactionHash` *[required]* - a string representing the 32 byte Ethereum transaction hash of the lift
- `proxySignature` *[required]* - a proof signed by the sender/signer account allowing the transaction to be proxied
- `feePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the relayer fees to be paid
- `paymentNonce` *[required]* - string integer value of the current account payment nonce

EXAMPLE

```
## JSON-RPC over HTTPS POST
curl https://AVN-API-URL/send \
  -X POST \
  -H "Content-Type: application/json" \
  -H "Authorization: bearer <awtToken>" \
  -d '{"jsonrpc":"2.0", "method":"proxyConfirmTokenLift",
"params":{"relayer":"5FbUQ2kJWLoqHuSTSNnqBwKwdQnBVe4HF3TeGyu6UoZaryTh",
"signer":"5DAgxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDdMr",
"ethereumTransactionHash":
"0xad7190f148fbd57b2a615c964b3ad2dcf17574ebf0d1c9778f6aab09657814ca",
"proxySignature":"0x362f3e1f9f8f8802b84a54562be6ae1451a959b84b037f98604
d9fa78d4f9ab068d6385baeaa16cd3a060829d5f776444af59d07c0755483acca220007
422319",
"feePaymentSignature":"0x5f3f0ca4ed32b4172998f816cf5e296553b29ec042a7b5
64c493568d3cf89687f08b9b48b17ca84f1935e8d844a9f133a239df12d7fa3d0fda58b
b9a9d65eb10", "paymentNonce":"314"}, "id":1}'
```

RESULT FIELDS

VALUE - a request ID that can be queried for the transaction's status

BODY

```
{
  "jsonrpc": "2.0",
```

```
"id": 1,  
"result": "8f7f76c8-a06e-11ec-b909-0242ac120002"  
}
```

proxyTokenLower

Triggers a "lower" of an amount of ETH (0xEeeeeEeeeEeEeeEeEeEeeEEEEeeeeEeeeeeeeEEeE) or any available ERC20 or ERC777 token, deducting the amount from the sender's AvN account.

The process is completed on Ethereum by calling the AvN tier1 contract's lower method after a summary containing the transaction has been published, in order for the recipient to receive the lowered amount.

REQUEST

POST <https://AVN-API-URL/send>

HEADERS

Content-Type: application/json

Authorization': bearer <awtToken>

REQUEST PARAMS

- `relayer` *[required]* - a string representing the relayer's SS58 address
- `signer` *[required]* - a string representing the sender's SS58 address
- `t1Recipient` *[required]* - a string representing the t1 recipient's 20 byte Ethereum address
- `token` *[required]* - a hex string representing the token ID (20 bytes) of the token being checked
- `amount` *[required]* - a string integer value representing the amount (in lowest fraction) of the token being transferred
- `proxySignature` *[required]* - a proof signed by the sender/signer account allowing the transaction to be proxied
- `feePaymentSignature` *[required]* - a proof signed by the sender/signer account allowing the relayer fees to be paid
- `paymentNonce` *[required]* - string integer value of the current account payment nonce

EXAMPLE

```
## JSON-RPC over HTTPS POST  
curl https://AVN-API-URL/send \  
  -X POST \  
  -H "Content-Type: application/json" \  
  -H "Authorization: bearer <awtToken>" \  
  -d '{"jsonrpc":"2.0", "method":"proxyTokenLower",  
"params":{"relayer":"5FbUQ2kJWLoqHuSTSNnqBwKwdQnBVe4HF3TeGyu6UoZaryTh",  
"signer":"5DAgxVxKmnJ7hfhDEB9UetZm4jR2MPjGZGrmJZjirSVJDDdMr",
```



```
"t1Recipient":"0xFad45995bc1ceE164E7565e301F5736F3eed3Bb1",
"token":"0x405df1b38510c455ef81500a3dc7e9ae599e18f6", "amount":"3",
"proxySignature":"0x8e38f2809d58c2a75cd0529ebb650e4447c3b192e6b9eb4a7ae
346049b1e18552565e94981e3bece4bf71667b88e54c39340aa931872f1f332ab72b94c
b9938c",
"feePaymentSignature":"0x9ae648e3c25ba12ae2272024ad7b0ed954e2f8057c544b
825f800e886b7a79213f24c884f9aac6d2cd5d0a7bff6a813140ee20e38e7374c054d31
d0834250684", "paymentNonce":"10"}, "id":1}'
```

RESULT FIELDS

VALUE - a request ID that can be queried for the transaction's status

BODY

```
{
  "jsonrpc": "2.0",
  "id": 1,
  "result": "8b62441c-e032-46e3-bd1d-0f8a0a764442"
}
```