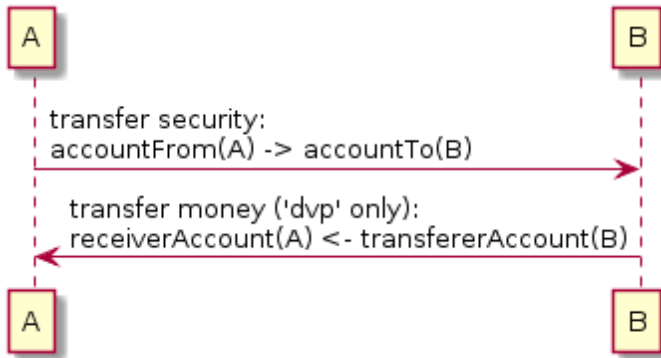


Instruction basic parameters

These parameters used to identify instruction in all requests. Any extra parameters can be appended after these.



```
[
// security transferer fields
"901",           // 0: char(12) accountFrom
"01",            // 1: char(17) divisionFrom

// security receiver fields
"902",           // 2: char(12) accountTo
"02",            // 3: char(17) divisionTo

"NSD00001",      // 4: char(?) security
"101",           // 5: integer quantity
"sample reference 1", // 6: char(?) reference
"2017-12-31",    // 7: instructionDate (ISO 8601: '2017-12-31')
"2017-12-31",    // 8: enu (ISO 8601)

"fop",           // 9: type ('fop'|'dvp')

// payment transferer fields
"40701810000000001000", // 10: transfererAccount (only type=='dvp')
"f044525505op",         // 11: transfererBic      (only type=='dvp')

// payment receiver fields
"40701810000000001000", // 12: receiverAccount   (only type=='dvp')
"f044525505op",         // 13: receiverBic       (only type=='dvp')

"30 000 000",          // 14: paymentAmount     (only type=='dvp')
```

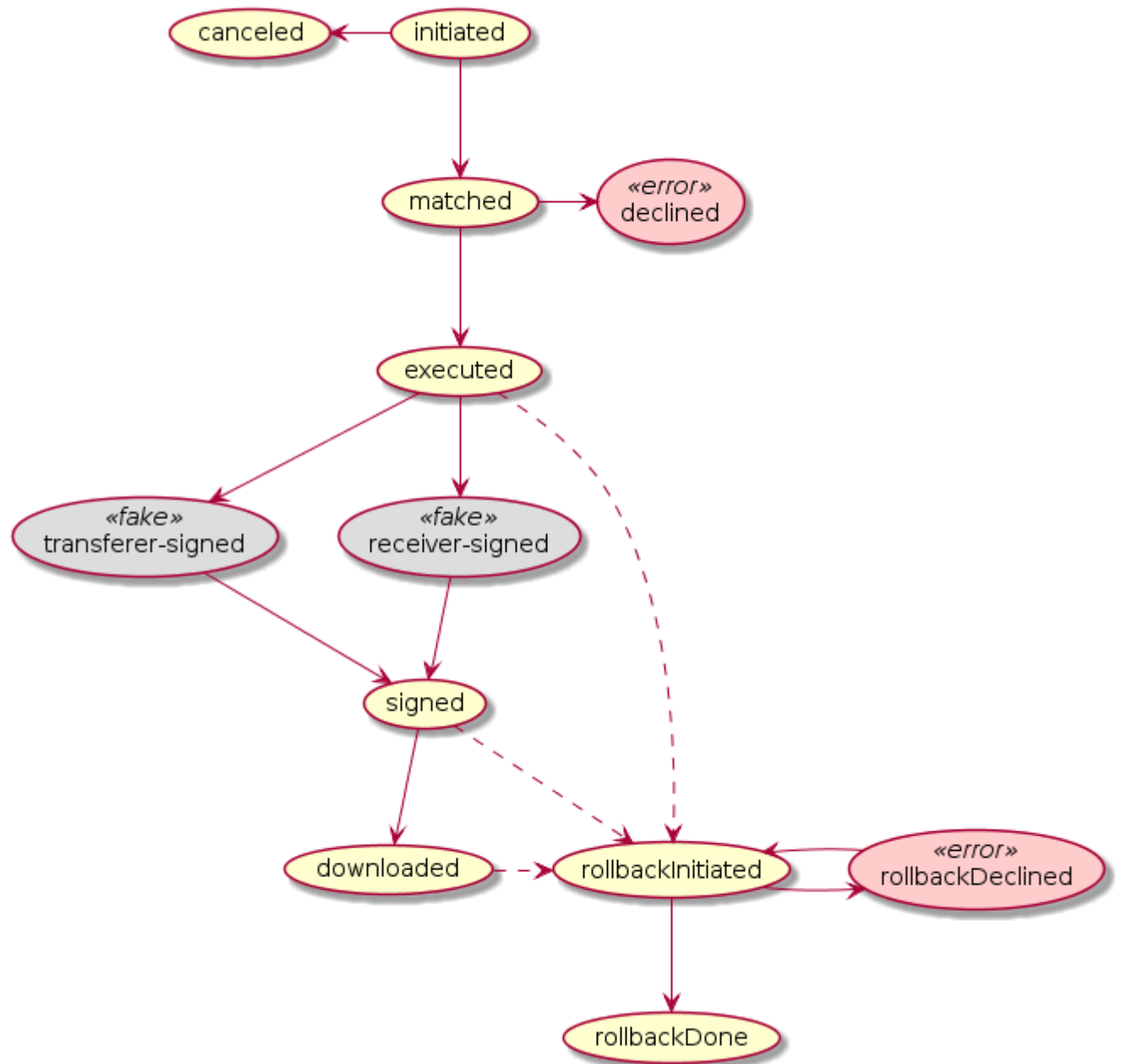
```
"RUB",                // 15: paymentCurrency    (only type=='dvp')  
]
```

Book basic parameters

```
[  
    account,  
    division,  
    security,  
]
```

Instruction flow

1. initiated -> matched -> executed -> (transferer-signed|receiver-signed) -> signed -> downloaded
2. initiated -> matched -> declined
3. initiated -> canceled
4. initiated -> matched -> executed -> (transferer-signed|receiver-signed) -> signed -> downloaded ->
rollbackInitiated -> rollbackDone | rollbackDeclined
5. rollbackDeclined -> rollbackInitiated -> rollbackDone | rollbackDeclined



book

Description here

Deployed in “depository” channel

Init Parameters

Init() method takes one argument: JSON string of format, described below

```
{
  "mainOrg": "nsd.nsd.ru",
  "initEntries": [
    {
      "account": "aEmissionAccount",
      "division": "aActiveDivision"
      "security": "RU000ABC0001",
      "quantity": "1000"
    }, {...}
  ]
}
```

query

Request

No parameters yet

Response

```
[
  {
    "balance": {
      "account": "aEmissionAccount",
      "division": "aActiveDivision"
    },
    "security": "RU000ABC0001",
    "quantity": 1000
  }, {...}
]
```

history

Request

```
[  
  <book basic parameters>  
]
```

Response

Not specified

move

Request

```
[  
  <instruction basic parameters>  
]
```

Response

Not specified

redeem

Request

```
[  
  security: string  
  reason : json string  
]
```

Response

Not specified

redeemHistory

Request

Not specified

Response

TBD

Instruction

This smart-contract represent interaction with security(Поручения)

transfer / receive

Create instruction to transfer security from the organisation to any participant.

Create instruction to transfer security from some participant to the the organisation.

Request

```
[  
<instruction basic parameters>,  
  
"UA001",           // char(12-17) deponentFrom  
"UA001",           // char(12-17) deponentTo  
"123",             // memberInstructionId  
"some reason"      // reason (json string)  
"some reason"      // extra reason (json string) (16/3 only)  
]
```

Response

Not specified

queryByType

Request

параметр это строка по которой надо фильтровать

Response

<see query>

query

Query instruction records, available for the organisation (both incoming and outgoing transactions)

Query parameters will be added later

Request

No parameters yet

Response

```
{
  "result": [
    {
      "key": {
        "transferer": {
          "account": "MZ130605006C",
          "division": "190000000000000000"
        },
        "receiver": {
          "account": "MS980129006C",
          "division": "000000000000000000"
        },
        "security": "RU000A0JWGG3",
        "quantity": "1",
        "reference": "TEST",
        "instructionDate": "2018-03-06",
        "tradeDate": "2018-03-06",
        "type": "dvp",
        "transfererRequisites": {
          "account": "30109810000000000000",
          "bic": "044525505"
        },
        "receiverRequisites": {
          "account": "40701810000000000100",
          "bic": "044525505"
        },
        "paymentAmount": "30000000",
        "paymentCurrency": "RUB"
      },
      "value": {
        "deponentFrom": "CA9861913023",
        "deponentTo": "DE000DB7HWY7",
        "status": "initiated",
        "initiator": "transferer",
        "memberInstructionIdFrom": "123",
        "memberInstructionIdTo": "",
        "reasonFrom": {
```



```

        "created": "",
        "document": "",
        "description": ""
    },
    "reasonTo": {
        "created": "",
        "document": "",
        "description": ""
    },
    "alamedaFrom": "",
    "alamedaTo": "",
    "alamedaSignatureFrom": "",
    "alamedaSignatureTo": "",
    "additionalInformation": {
        "created": "",
        "document": "",
        "description": ""
    }
}
}
]
}

```

status

Request

```

[
<instruction basic parameters>,

'sometext' // rollback comment (only for rollback)
'executed'|'declined'|'rollbackInitiated'|'rollbackDone'|'rollbackDeclined'
// status
]

```

Response

Not specified

history

Request

```
[  
<instruction basic parameters>,  
]
```

Response

TBD

getBalance

Request

No parameters yet

Response

```
[  
  {  
    "organization": "org1",  
    "balance": {  
      "account": "MZ0987654321",  
      "division": "190000000000000000"  
    }  
  },  
  {  
    "organization": "org1",  
    "balance": {  
      "account": "MZ0987654322",  
      "division": "220000000000000000"  
    }  
  },  
  {  
    "organization": "org2",  
    "balances": {  
      "account": "3010981000000000000000",  
      "division": "044525505"  
    }  
  }  
]
```

]

addBalances / removeBalances

NOTE: only NSD can call this methods.

Request

The only parameter is a JSON string containing an array of objects that must be added to or removed from the ledger, e.g.:

```
[
  {
    "organization": "org1",
    "balances": [
      {
        "account": "MZ0987654321",
        "division": "190000000000000000"
      },
      {
        "account": "MZ0987654322",
        "division": "220000000000000000"
      }
    ]
  },
  {
    "organization": "org2",
    "balances": [
      {
        "account": "30109810000000000000",
        "division": "044525505"
      }
    ]
  }
]
```

Response

Not specified

updateDownloadFlags

NOTE: only NSD can call this methods.

The last parameter specifies which flag should be set to true. When both flags are true and current status is 'signed', 'downloaded' status is set.

Request

```
[  
<instruction basic parameters>,  
  
'receiver'|'transferer' // party, whose signature was downloaded  
]
```

Response

Not specified

position

The same thing as [Book](#), but deployed in bilateral channel “nsd-<org>”

query

Request

No parameters yet

Response

```
[
  {
    "balance": {
      "account": "aEmissionAccount",
      "division": "aActiveDivision"
    },
    "security": "RU000ABC0001",
    "quantity": 1000
  }, {...}
]
```

history

Request

```
[
  <book basic parameters>
]todo
```

Response

Not specified

put

Request

```
[
```

<book basic parameters>,

quantity

]

Response

TODO

security

Description here

Init

Request

```
[
  {
    "security": "RU000ABC0001",
    "status": "active",
    "redeem": {
      "account": "aEmissionAccount",
      "division": "aActiveDivision"
    }
  }, {...}
]
```

query

Request

No parameters yet

Response

```
[
  {
    "security": "RU000ABC0001",
    "status": "active",
    "redeem": {
      "account": "aEmissionAccount",
      "division": "aActiveDivision"
    }
  }, {...}
]
```

addEntry

Request

```
[
    security
    type (coupon|maturity|redemption)???
    date // ISO date
    description // text
    reference
]
```

Response

No data yet

put

Request

```
[
    security :string
    status   :string
    redeemAccount :string
    redeemDivision :string
]
```

Response

No data yet