

Stake Contract

- A doctor registers by giving NPI no. as a profile_url in action - regbydoctor
- eosaidchains self adds into admins list by action - compaddadmin
- eosaidchains then as a admin verifies new doctors
- Patient stakes “500 TRPM” tokens to get rehab from doctor.
- The assigned doctor startrehab & set the lock period of 30 days.
- The Dr. can endrehab by setting the status as “cured” or “caught”.
- If cured, then Dr. gets 5% & remaining is returned back to the patient.
- Else if caught, then Dr. gets 100% tokens & the patient loses entirely.
- A doctor can be removed from the admins list when the no. is 5

About

- contract name - tropiumstake
- contract's account name - trpm111stake
- action
 - regbydoctor
 - verify
 - blacklist
 - compaddadmin
 - addadmin [Inline action]
 - remadmin [Inline action]
 - stake [notify action]
 - startrehab
 - endrehab
 - unstake
 - sendalert [Inline action]
- table
 - stakewallet
 - admins
 - auth

Compile

```

$ eosio-cpp tropiumstake.cpp -o tropiumstake.wasm
Warning, empty ricardian clause file
Warning, empty ricardian clause file
Warning, action <setadmins> does not have a ricardian contract
Warning, action <addadmin> does not have a ricardian contract
Warning, action <remadmin> does not have a ricardian contract
Warning, action <clradmins> does not have a ricardian contract
Warning, action <startrehab> does not have a ricardian contract
Warning, action <endrehab> does not have a ricardian contract
Warning, action <unstake> does not have a ricardian contract
Warning, action <setadmins> does not have a ricardian contract
Warning, action <addadmin> does not have a ricardian contract
Warning, action <remadmin> does not have a ricardian contract
Warning, action <clradmins> does not have a ricardian contract
Warning, action <startrehab> does not have a ricardian contract
Warning, action <endrehab> does not have a ricardian contract
Warning, action <unstake> does not have a ricardian contract

```

Deploy

- Deploy contract

```

$ cleost set contract trpm111stake ./
Reading WASM from
/mnt/f/Coding/github_repos/eosio_tropium_contracts/tropiumstake/tropiumsta
ke.wasm...
Publishing contract...
executed transaction:
140b1b3909e339087e107735210e912f34d915e92fea308277981bda2a831f41  11512
bytes  1027 us
#          eosio <= eosio::setcode
{"account":"trpm111stake","vmtype":0,"vmversion":0,"code":"0061736d0100000
001c6011f60000060017e00600...
#          eosio <= eosio::setabi
{"account":"trpm111stake","abi":"0e656f73696f3a3a6162692f312e3100090861646
461646d696e000306646f63746...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]

```

- Adding eosio.code to permissions (for inline actions)

```

$ cleost set account permission trpm111stake active --add-code
executed transaction:
2b070bd3086c310045e56ecae58674cc734d889aa5836c3ff1c381b21dc61b  184
bytes  149 us
#          eosio <= eosio::updateauth
{"account":"trpm111stake","permission":"active","parent":"owner","auth":
{"threshold":1,"keys":[{"key...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]

```

Testing

Action - regbydoctor

- A doctor trpmdoc11111 registers

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11111",  
"http://www.hipaaspace.com/medical_billing/coding/npi/codes/npi_1891894531  
.aspx"]' -p trpmdoc11111@active  
executed transaction:  
aa3f824fa95f52a48305d9f3886ab58935c82a4ac6e1c83cbd443a5b73b301e9 184  
bytes 317 us  
# trpm111stake <= trpm111stake::regbydoctor  
{"doctor":"trpmdoc11111","profile_url":"http://www.hipaaspace.com/medical_  
billing/coding/npi/codes/n...  
warning: transaction executed locally, but may not be confirmed by the  
network yet      ]
```

- view the table

```
$ cleost get table trpm111stake trpmdoc11111 auth --show-payer  
{  
  "rows": [{  
    "data": {  
      "doctor": "trpmdoc11111",  
      "profile_url":  
"http://www.hipaaspace.com/medical_billing/coding/npi/codes/npi_189189  
4531.aspx",  
      "user_status": "added",  
      "add_timestamp": 1600709811,  
      "verify_timestamp": 0,  
      "blist_timestamp": 0,  
      "validator_verify": "",  
      "validators_blacklist": []  
    },  
    "payer": "trpmdoc11111"  
  }  
],  
  "more": false,  
  "next_key": ""  
}
```

- A doctor trpmdoc11111 registers again & gets error

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11111",  
"http://www.hipaaspace.com/medical_billing/coding/npi/codes/npi_1891894531  
.aspx"]' -p trpmdoc11111@active  
Error 3050003: eosio_assert_message assertion failure  
Error Details:  
assertion failure with message: the doctor's info is already added.  
pending console output:
```

- Likewise, trpmdoc11112 , trpmdoc11113 , trpmdoc11114 , trpmdoc11115 ,
trpmdoc11121 doctors register
- for doctor trpmdoc11112

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11112",  
"https://www.hipaaspace.com/medical_billing/coding/national_provider_ident  
ifier/codes/npi_1467586115.aspx"]' -p trpmdoc11112@active  
executed transaction:  
bcebae79c7515007f578ed1536ba2038a899dbd59eded1cbf1d775f983af1968 208  
bytes 203 us  
# trpm111stake <= trpm111stake::regbydoctor  
{ "doctor": "trpmdoc11112", "profile_url": "https://www.hipaaspace.com/medical  
_billing/coding/national_p...  
warning: transaction executed locally, but may not be confirmed by the  
network yet ]
```

- for doctor trpmdoc11113

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11113",  
"https://www.hipaaspace.com/medical_billing/coding/national_provider_ident  
ifier/codes/npi_1467586115.aspx"]' -p trpmdoc11113@active  
executed transaction:  
aa567df6659ea5557686f8c25272c26ee8da3712345f35cc35a42f6044d32dc5 208  
bytes 177 us  
# trpm111stake <= trpm111stake::regbydoctor  
{ "doctor": "trpmdoc11113", "profile_url": "https://www.hipaaspace.com/medical  
_billing/coding/national_p...  
warning: transaction executed locally, but may not be confirmed by the  
network yet ]
```

- for doctor trpmdoc11114

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11114",
"https://www.hipaaspace.com/
medical_billing/coding/national_provider_identifler/codes/npi_1467586115.a
spx"]' -p trpmdoc11114@active
executed transaction:
e6e27f6e4918965da90eca99df8c79c99142042a109a415e0ca84c135f3f4af0  208
bytes  250 us
# trpm111stake <= trpm111stake::regbydoctor
{"doctor":"trpmdoc11114","profile_url":"https://www.hipaaspace.com/medical
_billing/coding/national_p...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- for doctor trpmdoc11115

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11115",
"https://www.hipaaspace.com/
medical_billing/coding/national_provider_identifler/codes/npi_1467586115.a
spx"]' -p trpmdoc11115@active
executed transaction:
9a9d7606b752ed05d5d62b96ef553f21203d036402857f25a1fefec7b0818e9c  208
bytes  176 us
# trpm111stake <= trpm111stake::regbydoctor
{"doctor":"trpmdoc11115","profile_url":"https://www.hipaaspace.com/medical
_billing/coding/national_p...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- for doctor trpmdoc11121

```
$ cleost push action trpm111stake regbydoctor '["trpmdoc11121",
"https://www.hipaaspace.com/medical_billing/coding/national_provider_ident
ifier/codes/npi_1467586115.aspx"]' -p trpmdoc11121@active
executed transaction:
4f848045140b04c036c6e6340906153a9ce8c7c579a2fa333f5b5c9f9969edeb  208
bytes  264 us
# trpm111stake <= trpm111stake::regbydoctor
{"doctor":"trpmdoc11121","profile_url":"https://www.hipaaspace.com/medical
_billing/coding/national_p...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

Action - compaddadmin

- founder eosaidchains add itself as admin to the list

```
$ cleost push action trpm111stake compaddadmin '[]' -p eosaidchains@active
executed transaction:
7c0cbbb2368822ef386bff28e58d7200efa43b9015fd9c9a607af593a7757950  104
bytes  156 us
# trpm111stake <= trpm111stake::compaddadmin
{"founder_ac":"eosaidchains"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains"
      ]
    },
    "payer": "trpm111stake"
  ]
},
"more": false,
"next_key": ""
}
```

- founder eosaidchains add itself as admin to the list again & gets error

```
$ cleost push action trpm111stake compaddadmin '[]' -p eosaidchains@active
Error 3050003: eosio_assert_message assertion failure
Error Details:
assertion failure with message: admins list is already initialized by
founder: 'eosaidchains'. So, can't be redone.
pending console output:
```

Action - verify

- founder eosaidchains verifies the doctor trpmdoc11111

```
$ cleost push action trpm111stake verify '["eosaidchains",
"trpmdoc11111"]' -p eosaidchains@active
executed transaction:
5ad2aa167840d1d1ec50bcef94f289b211ab45431368b717c23f720cdf0e4c9c  112
bytes  379 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor": "eosaidchains", "new_doctor": "trpmdoc11111"}
# trpm111stake <= trpm111stake::addadmin {"doctor": "trpmdoc11111"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table auth

```
$ cleost get table trpm111stake trpmdoc11111 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11111",
      "profile_url":
"http://www.hipaaspace.com/medical_billing/coding/npi/codes/npi_1891894531
.aspx",
      "user_status": "verified",
      "add_timestamp": 1600709811,
      "verify_timestamp": 1600716255,
      "blist_timestamp": 0,
      "validator_verify": "eosaidchains",
      "validators_blacklist": []
    },
    "payer": "trpm111stake"
  }
],
  "more": false,
  "next_key": ""
}
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111"
      ]
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}
```

- Observations
 - doctor has been verified
 - doctor has been added into the admins list
- Now, other than eosaidchains , other admins like trpmdoc11111 can verify new doctors - trpmdoc11112 , trpmdoc11113
- to verify trpmdoc11112

```
$ cleost push action trpm111stake verify '["trpmdoc11111",
"trpmdoc11112"]' -p trpmdoc11111@active
executed transaction:
d72f6fffd51fbac582847ea64e1d053a30e56568d8100c08074d6216d7baf420a  112
bytes  216 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor":"trpmdoc11111","new_doctor":"trpmdoc11112"}
# trpm111stake <= trpm111stake::addadmin {"doctor":"trpmdoc11112"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins


```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112"
      ]
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}
```

- to verify trpmdoc11113

```
$ cleost push action trpm111stake verify '["trpmdoc11111",
"trpmdoc11113"]' -p trpmdoc11111@active
executed transaction:
cf525883fd62826c893757ce6a3723f26c1196aab12c5e59307a1eddd0096b21  112
bytes  207 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor":"trpmdoc11111","new_doctor":"trpmdoc11113"}
# trpm111stake <= trpm111stake::addadmin {"doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113"
      ]
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}
```

- Now, new admins like trpmdoc11112 can verify new doctors - trpmdoc11114 , trpmdoc11115 , trpmdoc11121
- to verify trpmdoc11114

```
$ cleost push action trpm111stake verify '["trpmdoc11112",
"trpmdoc11114"]' -p trpmdoc11112@active
executed transaction:
31ca2183c79635ce86e9883dfca2ae116deeee960f005558c5f41f5ea51e3423  112
bytes  207 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor":"trpmdoc11112","new_doctor":"trpmdoc11114"}
# trpm111stake <= trpm111stake::addadmin {"doctor":"trpmdoc11114"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114"
      ]
    },
    "payer": "trpm111stake"
  ]
},
"more": false,
"next_key": ""
}
```

- to verify trpmdoc11115

```
$ cleost push action trpm111stake verify '["trpmdoc11112",
"trpmdoc11115"]' -p trpmdoc11112@active
executed transaction:
726d8ef5ae1b97e9d505b8c2738c7819903a2d8886d201b9913f4942c21ccce7  112
bytes  208 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor":"trpmdoc11112","new_doctor":"trpmdoc11115"}
# trpm111stake <= trpm111stake::addadmin {"doctor":"trpmdoc11115"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

- to verify trpmdoc11121

```
$ cleost push action trpm111stake verify '["trpmdoc11112",
"trpmdoc11121"]' -p trpmdoc11112@active
executed transaction:
150d6c3fbb3556fb48262cd6f4f1c8a651c697920b905ecb3f782d53fbe03227  112
bytes  193 us
# trpm111stake <= trpm111stake::verify
{"verified_doctor":"trpmdoc11112","new_doctor":"trpmdoc11121"}
# trpm111stake <= trpm111stake::addadmin {"doctor":"trpmdoc11121"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

Action - blacklist

- Now, let's blacklist a doctor `trpmdoc11113` from the admins list. This requires 5 doctors to blacklist the doctor. 1. blacklist by `eosaidchains`

```
$ cleost push action trpm111stake blacklist '["eosaidchains",
"trpmdoc11113"]' -p eosaidchains@active
executed transaction:
4f5054342a0607ae5f1ff11b87b792f4f10a8b6eede5a06bb315259cac028c19 112
bytes 221 us
# trpm111stake <= trpm111stake::blacklist
{"verified_doctor":"eosaidchains","doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table `admins`

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

- o view the table auth

```
$ cleost get table trpm111stake trpmdoc11113 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11113",
      "profile_url":
"https://www.hipaaspace.com/medical_billing/coding/national_provider_i
dentifier/codes/npi_1467586115.aspx",
      "user_status": "blacklisted",
      "add_timestamp": 1600716893,
      "verify_timestamp": 1600719809,
      "blist_timestamp": 1600720704,
      "validator_verify": "trpmdoc11111",
      "validators_blacklist": [
        "eosaidchains"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

2. blacklist by trpmdoc11111

```

$ cleost push action trpm111stake blacklist '["trpmdoc11111",
"trpmdoc11113"]' -p trpmdoc11111@active
executed transaction:
98390b0c18ea86f6aa7c354d2c23354024a6b458e321c64e92dd9161440218dd  112
bytes  220 us
# trpm111stake <= trpm111stake::blacklist
{"verified_doctor":"trpmdoc11111","doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]

```

- view the table admins

```

$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}

```

- view the table auth

```
$ cleost get table trpm111stake trpmdoc11113 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11113",
      "profile_url":
"https://www.hipaaspace.com/medical_billing/coding/national_provider_i
dentifier/codes/npi_1467586115.aspx",
      "user_status": "blacklisted",
      "add_timestamp": 1600716893,
      "verify_timestamp": 1600719809,
      "blist_timestamp": 1600720756,
      "validator_verify": "trpmdoc11111",
      "validators_blacklist": [
        "eosaidchains",
        "trpmdoc11111"
      ]
    },
    "payer": "trpm111stake"
  ]
},
"more": false,
"next_key": ""
}
```

3. blacklist by trpmdoc11112

```
$ cleost push action trpm111stake blacklist '["trpmdoc11112",
"trpmdoc11113"]' -p trpmdoc11112@active
executed transaction:
4af6e38bca522e04241f37b667ae875c75b68e77ee1981460dc0008e02d7a09c 112
bytes 281 us
# trpm111stake <= trpm111stake::blacklist
{"verified_doctor":"trpmdoc11112","doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

- o view the table auth

```
$ cleost get table trpm111stake trpmdoc11113 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11113",
      "profile_url":
        "https://www.hipaaspace.com/medical_billing/coding/national_provider_i
dentifier/codes/npi_1467586115.aspx",
      "user_status": "blacklisted",
      "add_timestamp": 1600716893,
      "verify_timestamp": 1600719809,
      "blist_timestamp": 1600720833,
      "validator_verify": "trpmdoc11111",
      "validators_blacklist": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

4. blacklist by trpmdoc11114


```

$ cleost push action trpm111stake blacklist '["trpmdoc11114",
"trpmdoc11113"]' -p trpmdoc11114@active
executed transaction:
1eba132df4202f1a0a1f4d79d393bc214cee3fb84174f0f623bca8bbdb9dfc1c  112
bytes  210 us
# trpm111stake <= trpm111stake::blacklist
{"verified_doctor":"trpmdoc11114","doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]

```

- view the table admins

```

$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11113",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}

```

- view the table auth

```
$ cleost get table trpm111stake trpmdoc11113 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11113",
      "profile_url":
"https://www.hipaaspace.com/medical_billing/coding/national_provider_i
dentifier/codes/npi_1467586115.aspx",
      "user_status": "blacklisted",
      "add_timestamp": 1600716893,
      "verify_timestamp": 1600719809,
      "blist_timestamp": 1600720992,
      "validator_verify": "trpmdoc11111",
      "validators_blacklist": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11114"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

5. blacklist by trpmdoc11115

```
$ cleost push action trpm111stake blacklist '["trpmdoc11115",
"trpmdoc11113"]' -p trpmdoc11115@active
executed transaction:
627956fe804fb2061b0a13455b617050326b8ecf2a90453f2d1379b3fdb5e4fb  112
bytes  204 us
# trpm111stake <= trpm111stake::blacklist
{"verified_doctor":"trpmdoc11115","doctor":"trpmdoc11113"}
# trpm111stake <= trpm111stake::remadmin      {"doctor":"trpmdoc11113"}
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table admins

```
$ cleost get table trpm111stake trpm111stake admins --show-payer
{
  "rows": [{
    "data": {
      "type": "doctor",
      "vector_admin": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11114",
        "trpmdoc11115",
        "trpmdoc11121"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

- view the table auth

```
$ cleost get table trpm111stake trpmdoc11113 auth --show-payer
{
  "rows": [{
    "data": {
      "doctor": "trpmdoc11113",
      "profile_url":
"https://www.hipaaspace.com/medical_billing/coding/national_provider_i
dentifier/codes/np_1467586115.aspx",
      "user_status": "blacklisted",
      "add_timestamp": 1600716893,
      "verify_timestamp": 1600719809,
      "blist_timestamp": 1600721078,
      "validator_verify": "trpmdoc11111",
      "validators_blacklist": [
        "eosaidchains",
        "trpmdoc11111",
        "trpmdoc11112",
        "trpmdoc11114",
        "trpmdoc11115"
      ]
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

- Obeservations

- After 5 other doctors (as admins) when votes for blacklisting the doctor `trpmdoc11113`, then the doctor is removed from the admin list

Action - stake [Payable action]

- patient `trpmuser1112` transfers “500 TRPM” for stake before admitting into rehab
- view the token accounts table

```
$ cleost get table trpm111token trpmuser1112 accounts
{
  "rows": [{
    "balance": "610.9600 TRPM"
  }],
  "more": false,
  "next_key": ""
}
```

- transfers token - 500 TRPM, otherwise not transferred

```
$ cleost push action trpm111token transfer '["trpmuser1112",
"trpm111stake", "500.0000 TRPM", "transfer 500 TRPM tokens for Rehab
admission"]' -p trpmuser1112@active
executed transaction:
a67dda52e57dbcff0b16407e5073d0643f4d56bd371f0dfb2da5ac6aa60eeede 176
bytes 325 us
# trpm111token <= trpm111token::transfer
{"from":"trpmuser1112","to":"trpm111stake","quantity":"500.0000
TRPM","memo":"transfer 500 TRPM toke...
# trpmuser1112 <= trpm111token::transfer
{"from":"trpmuser1112","to":"trpm111stake","quantity":"500.0000
TRPM","memo":"transfer 500 TRPM toke...
# trpm111stake <= trpm111token::transfer
{"from":"trpmuser1112","to":"trpm111stake","quantity":"500.0000
TRPM","memo":"transfer 500 TRPM toke...
warning: transaction executed locally, but may not be confirmed by the
network yet      ]
```

- view the table `stakewallet`

```
$ cleost get table trpm111stake trpmuser1112 stakewallet --show-payer
{
  "rows": [{
    "data": {
      "staked_qty": "500.0000 TRPM",
      "lock_timestamp": 0,
      "start_timestamp": 0,
      "end_timestamp": 0,
      "doctor": "",
      "patient_status": "unassigned"
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

Action - startrehab

- trpmdoc11111 sets lock period of 30 days for the patient trpmuser1112

```
$ cleost push action trpm111stake startrehab '["trpmdoc11111",
"trpmuser1112", "1603315246"]' -p trpmdoc11111@active
executed transaction:
baef75039a2ec4e248c3039ee3c25104c81bf348b4bbcab70cae6d54aa8e34d  112
bytes  277 us
# trpm111stake <= trpm111stake::startrehab
{"verified_doctor":"trpmdoc11111","patient":"trpmuser1112","lock_timestamp":1603315246}
# trpm111stake <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"Your rehab period is started by the doctor: 'trpmdoc11111'."}
# trpmuser1112 <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"Your rehab period is started by the doctor: 'trpmdoc11111'."}
warning: transaction executed locally, but may not be confirmed by the network yet      ]
```

- View the table stakewallet

```
$ cleost get table trpm111stake trpmuser1112 stakewallet --show-payer
{
  "rows": [{
    "data": {
      "staked_qty": "500.0000 TRPM",
      "lock_timestamp": 1603315246,
      "start_timestamp": 1600723257,
      "end_timestamp": 0,
      "doctor": "trpmdoc11111",
      "patient_status": "assigned"
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

Action - endrehab

- Some other doctor tries to end the rehab & gets error

```
$ cleost push action trpm111stake endrehab '["trpmdoc11115",
"trpmuser1112", "caught"]' -p trpmdoc11115@active
Error 3050003: eosio_assert_message assertion failure
Error Details:
assertion failure with message: parsed Doctor's name does not match with
assigned Dr. name.
pending console output:
```

Case-1: Caught

- trpmdoc11111 caught & ends rehab.

```
$ cleost push action trpm111stake endrehab '["trpmdoc11111",
"trpmuser1112", "caught"]' -p trpmdoc11111@active
executed transaction:
818efd04b014c6b6039ea81473788873e50e30b9ce62846ad7ee77ecbf473c36 120
bytes 201 us
# trpm111stake <= trpm111stake::endrehab
{"doctor":"trpmdoc11111","patient":"trpmuser1112","patient_status":"caught"}
# trpm111stake <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"Your rehab period is ended as the
doctor: 'trpmdoc11111' mentioned..."}
# trpmuser1112 <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"Your rehab period is ended as the
doctor: 'trpmdoc11111' mentioned..."}
warning: transaction executed locally, but may not be confirmed by the
network yet ]
```

- o View the table stakewallet

```
$ cleost get table trpm111stake trpmuser1112 stakewallet --show-payer
{
  "rows": [{
    "data": {
      "staked_qty": "500.0000 TRPM",
      "lock_timestamp": 1603315246,
      "start_timestamp": 1600723257,
      "end_timestamp": 1600723416,
      "doctor": "trpmdoc11111",
      "patient_status": "caught"
    },
    "payer": "trpm111stake"
  }],
  "more": false,
  "next_key": ""
}
```

Case-2: Cured

Action - unstake

- patient wants to unstake after rehab is ended with “caught” status

```
$ cleost push action trpm111stake unstake '["trpmuser1112"]' -p
trpmuser1112@active
executed transaction:
0b74a3a54cb2422e70716b817118fa450ab557d7616290a6290d42d54304af4c 104
bytes 331 us
# trpm111stake <= trpm111stake::unstake {"patient":"trpmuser1112"}
# trpm111token <= trpm111token::transfer
{"from":"trpm111stake","to":"trpmdoc11111","quantity":"500.0000
TRPM","memo":"TROPIUM Stake contract...
# trpm111stake <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"You lose your staked tokens: '500.0000
TRPM' for rehab"}
# trpm111stake <= trpm111token::transfer
{"from":"trpm111stake","to":"trpmdoc11111","quantity":"500.0000
TRPM","memo":"TROPIUM Stake contract...
>> Either money is not sent to the contract or contract itself is the
buyer.
# trpmdoc11111 <= trpm111token::transfer
{"from":"trpm111stake","to":"trpmdoc11111","quantity":"500.0000
TRPM","memo":"TROPIUM Stake contract...
# trpmuser1112 <= trpm111stake::sendalert
{"user":"trpmuser1112","message":"You lose your staked tokens: '500.0000
TRPM' for rehab"}
warning: transaction executed locally, but may not be confirmed by the
network yet ]
```

- Here, the patient loses all its staked tokens to Doctor.
- view the doctor's TRPM balance

```
$ cleost get table trpm111token trpmdoc11111 accounts --show-payer
{
  "rows": [{
    "data": {
      "balance": "500.0000 TRPM"
    },
    "payer": "trpm111stake"
  }
],
"more": false,
"next_key": ""
}
```

- View the table stakewallet

```
$ cleost get table trpm111stake trpmuser1112 stakewallet --show-payer
{
  "rows": [],
  "more": false,
  "next_key": ""
}
```

TODO

- ☐ the auth table data ownership is transferred from new doctor to contract itself. as the verification is done.
- transfer back to the new doctor by an ACTION owndata(), only then the doctor is added to the admins list.