

```
;; Valid extensions must be registered here. The DAO is bootstrapped
 6
 7
       ;; by calling construct with a bootstrap proposal.
8
       (use-trait extension-trait.extension-trait)
9
       (use-trait proposal-trait.proposal-trait)
10
11
       (define-constant err-unauthorised (err u1000))
12
13
       (define-constant err-already-executed (err u1001))
       (define-constant err-invalid-extension (err u1002))
14
15
       (define-data-var executive principal tx-sender)
16
       (define-map executed-proposals principal uint)
17
       (define-map extensions principal bool)
18
19
       ;; --- Authorisation check
20
21
       (define-private (is-self-or-extension)
22
               (ok (asserts! (or (is-eq tx-sender (as-contract tx-sender)) (is-extension contract-cate)
23
       )
24
25
26
       ;; --- Extensions
27
       (define-read-only (is-extension (extension principal))
28
29
               (default-to false (map-get? extensions extension))
30
       )
31
       (define-public (set-extension (extension principal) (enabled bool))
32
33
34
                       (try! (is-self-or-extension))
                       (print {event: "extension", extension: extension, enabled: enabled})
35
36
                       (ok (map-set extensions extension enabled))
37
```

```
)
38
39
40
      (define-private (set-extensions-iter (item {extension: principal, enabled: bool}))
41
             (begin
42
                     (print {event: "extension", extension: (get extension item), enabled: (get er
43
                     (map-set extensions (get extension item) (get enabled item))
             )
44
      )
45
46
      (define-public (set-extensions (extension-list (list 200 {extension: principal, enabled: bool
47
             (begin
48
49
                     (try! (is-self-or-extension))
50
                     (ok (map set-extensions-iter extension-list))
             )
51
      )
52
53
54
      ;; --- Proposals
55
      56
             (map-get? executed-proposals (contract-of proposal))
57
      )
58
59
60
      61
             (begin
62
                    (try! (is-self-or-extension))
63
                     (asserts! (map-insert executed-proposals (contract-of proposal) block-height)
64
                     (print {event: "execute", proposal: proposal})
                     (as-contract (contract-call? proposal execute sender))
65
66
             )
67
      )
68
69
      ;; --- Bootstrap
70
71
      72
             (let ((sender tx-sender))
73
                     (asserts! (is-eq sender (var-get executive)) err-unauthorised)
                     (var-set executive (as-contract tx-sender))
74
75
                     (as-contract (execute proposal sender))
76
             )
77
      )
78
79
      ;; --- Extension requests
80
      (define-public (request-extension-callback (extension <extension-trait>) (memo (buff 34)))
81
             (let ((sender tx-sender))
82
83
                     (asserts! (is-extension contract-caller) err-invalid-extension)
84
                     (asserts! (is-eq contract-caller (contract-of extension)) err-invalid-extensi
                     (as-contract (contract-call? extension callback sender memo))
85
86
             )
87
      )
```

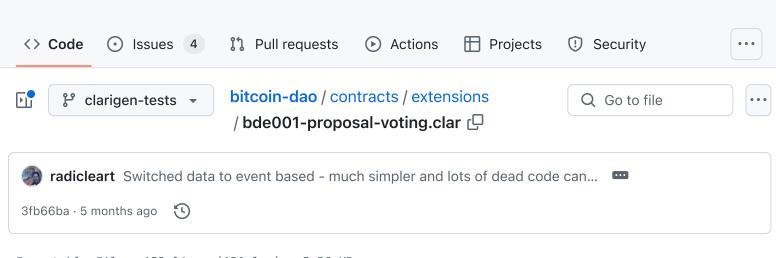
```
☐ radicleart / bitcoin-dao Public
                                                            Security
  <> Code
             • Issues 4
                             ?? Pull requests
                                              Actions
                             bitcoin-dao / contracts / extensions
 酠
       ሥ clarigen-tests ▼
                                                                           Q Go to file
                             / bde000-governance-token.clar 🖵
 🌉 radicleart Switched data to event based - much simpler and lots of dead code can... 🚥
 3fb66ba · 5 months ago
 Executable File · 168 lines (132 loc) · 4.14 KB
                                                                           Code
           Blame
      1
            ;; Title: BDE000 Governance Token
      2
            ;; Author: Mike Cohen (based upon work of Marvin Janssen)
      3
            ;; Depends-On:
      4
            ;; Synopsis:
            ;; This extension defines the governance token of Bitcoin DAO.
      5
            ;; Description:
      7
            ;; The governance token is a simple SIP010-compliant fungible token
            ;; with some added functions to make it easier to manage by
      8
```

```
;; Bitcoin DAO proposals and extensions.
 9
10
11
       (impl-trait .governance-token-trait.governance-token-trait)
       (impl-trait .sip010-ft-trait.sip010-ft-trait)
12
13
       (impl-trait .extension-trait.extension-trait)
14
15
       (define-constant err-unauthorised (err u3000))
       (define-constant err-not-token-owner (err u4))
16
17
       (define-fungible-token bdg-token)
18
19
       (define-fungible-token bdg-token-locked)
20
       (define-data-var token-name (string-ascii 32) "{{token_name}}")
21
       (define-data-var token-symbol (string-ascii 10) "{{symbol}}")
22
       (define-data-var token-uri (optional (string-utf8 256)) (some u"{{token_uri}}"))
23
       (define-data-var token-decimals uint u6)
24
25
26
       ;; --- Authorisation check
27
       (define-public (is-dao-or-extension)
28
29
               (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
       )
30
31
       ;; --- Internal DAO functions
32
33
34
       ;; governance-token-trait
35
       (define-public (bdg-transfer (amount uint) (sender principal) (recipient principal))
36
37
               (begin
```

```
38
                        (try! (is-dao-or-extension))
39
                        (ft-transfer? bdg-token amount sender recipient)
40
               )
       )
41
42
43
       (define-public (bdg-lock (amount uint) (owner principal))
                (begin
44
45
                        (try! (is-dao-or-extension))
                        (try! (ft-burn? bdg-token amount owner))
46
                        (ft-mint? bdg-token-locked amount owner)
47
               )
48
49
       )
50
       (define-public (bdg-unlock (amount uint) (owner principal))
51
52
                (begin
53
                        (try! (is-dao-or-extension))
                        (try! (ft-burn? bdg-token-locked amount owner))
54
                        (ft-mint? bdg-token amount owner)
55
               )
56
       )
57
58
59
       (define-public (bdg-mint (amount uint) (recipient principal))
60
                (begin
61
                        (try! (is-dao-or-extension))
                        (ft-mint? bdg-token amount recipient)
62
63
               )
       )
64
65
66
       (define-public (bdg-burn (amount uint) (owner principal))
67
                (begin
                        (try! (is-dao-or-extension))
68
69
                        (ft-burn? bdg-token amount owner)
70
71
               )
72
       )
73
74
       ;; Other
75
76
       (define-public (set-name (new-name (string-ascii 32)))
77
                (begin
78
                        (try! (is-dao-or-extension))
79
                        (ok (var-set token-name new-name))
               )
80
       )
81
82
83
       (define-public (set-symbol (new-symbol (string-ascii 10)))
                (begin
84
85
                        (try! (is-dao-or-extension))
86
                        (ok (var-set token-symbol new-symbol))
87
               )
       )
88
89
90
       (define-public (set-decimals (new-decimals uint))
91
                (begin
92
                        (try! (is-dao-or-extension))
93
                        (ok (var-set token-decimals new-decimals))
```

```
94
                )
 95
        )
 96
 97
        (define-public (set-token-uri (new-uri (optional (string-utf8 256))))
 98
                (begin
 99
                         (try! (is-dao-or-extension))
100
                         (ok (var-set token-uri new-uri))
                )
101
102
        )
103
104
        (define-private (bdg-mint-many-iter (item {amount: uint, recipient: principal}))
105
                (ft-mint? bdg-token (get amount item) (get recipient item))
        )
106
107
108
        (define-public (bdg-mint-many (recipients (list 200 {amount: uint, recipient: principal})))
                (begin
109
110
                         (try! (is-dao-or-extension))
111
                         (ok (map bdg-mint-many-iter recipients))
112
                )
113
        )
114
115
        ;; --- Public functions
116
117
        ;; sip010-ft-trait
118
119
        (define-public (transfer (amount uint) (sender principal) (recipient principal) (memo (option
120
                (begin
121
                         (asserts! (or (is-eq tx-sender sender) (is-eq contract-caller sender)) err-nd
122
                         (ft-transfer? bdg-token amount sender recipient)
123
                )
124
        )
125
126
        (define-read-only (get-name)
                (ok (var-get token-name))
127
        )
128
129
        (define-read-only (get-symbol)
130
131
                (ok (var-get token-symbol))
        )
132
133
134
        (define-read-only (get-decimals)
135
                (ok (var-get token-decimals))
        )
136
137
        (define-read-only (get-balance (who principal))
138
139
                (ok (+ (ft-get-balance bdg-token who) (ft-get-balance bdg-token-locked who)))
        )
140
141
142
        (define-read-only (get-total-supply)
                (ok (+ (ft-get-supply bdg-token) (ft-get-supply bdg-token-locked)))
143
144
        )
145
        (define-read-only (get-token-uri)
146
147
                (ok (var-get token-uri))
148
        )
149
```

```
150
        ;; governance-token-trait
151
        (define-read-only (bdg-get-balance (who principal))
152
                (get-balance who)
153
154
        )
155
        (define-read-only (bdg-has-percentage-balance (who principal) (factor uint))
156
                (ok (>= (* (unwrap-panic (get-balance who)) factor) (* (unwrap-panic (get-total-supp))
157
        )
158
159
        (define-read-only (bdg-get-locked (owner principal))
160
                (ok (ft-get-balance bdg-token-locked owner))
161
        )
162
163
       ;; --- Extension callback
164
165
166
        (define-public (callback (sender principal) (memo (buff 34)))
                (ok true)
167
168
        )
```



Executable File · 152 lines (130 loc) · 5.56 KB

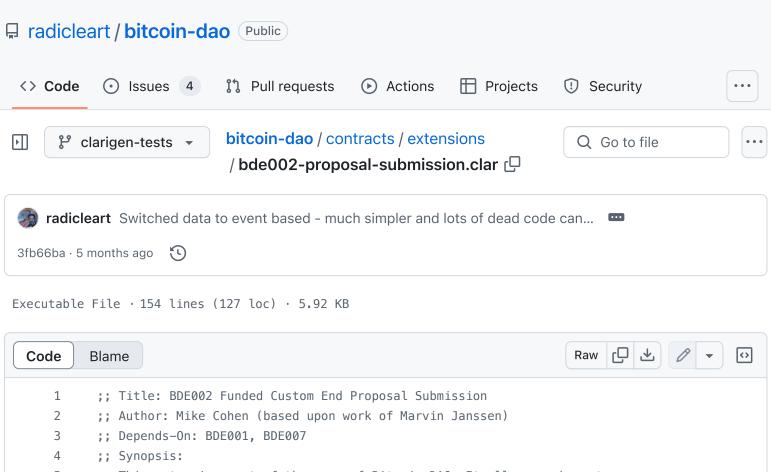
☐ radicleart / bitcoin-dao (Public)

```
Raw ☐ 业 Ø →
Code
        Blame
   1
         ;; Title: BDE001 Snapshot Proposal Voting
   2
         ;; Author: Mike Cohen (based upon work of Marvin Janssen)
   3
         ;; Depends-On:
         ;; Synopsis:
   4
         ;; This extension is a concept that allows all STX holders to
   5
         ;; vote on proposals based on their STX balance.
   7
         ;; Description:
         ;; This extension allows anyone with STX to vote on proposals. The maximum upper
   8
         ;; bound, or voting power, depends on the amount of STX tokens the tx-sender
   9
         ;; owned at the start block height of the proposal. The name "snapshot" comes
  10
         ;; from the fact that the extension effectively uses the STX balance sheet
  11
         ;; at a specific block heights to determine voting power.
  12
         ;; Custom majority thresholds for voting are also possible on a per proposal basis.
         ;; A custom majority of 66% mean the percent of votes for must be greater than 66 for
  14
         ;; the vote to carry.
  15
  16
  17
         (impl-trait .extension-trait.extension-trait)
         (use-trait proposal-trait.proposal-trait)
  18
  19
         (define-constant err-unauthorised (err u3000))
  20
         (define-constant err-proposal-already-executed (err u3001))
  21
         (define-constant err-proposal-already-exists (err u3002))
  22
  23
         (define-constant err-unknown-proposal (err u3003))
         (define-constant err-proposal-already-concluded (err u3004))
  24
         (define-constant err-proposal-inactive (err u3005))
  25
  26
         (define-constant err-insufficient-voting-capacity (err u3006))
         (define-constant err-end-burn-height-not-reached (err u3007))
  27
         (define-constant err-not-majority (err u3008))
  28
  29
         (define-constant err-exceeds-voting-cap (err u3009))
  30
  31
         (define-constant custom-majority-upper u10000)
  32
         (define-constant vote-cap u140000000000)
  33
  34
         (define-map proposals
  35
                  principal
  36
                  {
  37
                          votes-for: uint,
```

```
38
                      votes-against: uint,
                      start-height-stacks: uint,
39
40
                      start-burn-height: uint,
41
                      end-burn-height: uint,
42
                      concluded: bool,
43
                      passed: bool,
                      custom-majority: (optional uint), ;; u10000 = 100%
44
                      proposer: principal
45
              }
46
      )
47
48
      (define-map member-total-votes {proposal: principal, voter: principal} uint)
49
50
51
      ;; --- Authorisation check
52
      (define-public (is-dao-or-extension)
53
54
              (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
55
      )
56
57
      ;; --- Internal DAO functions
58
59
      ;; Proposals
60
      61
62
              (begin
63
                      (try! (is-dao-or-extension))
64
                      (asserts! (is-none (contract-call? .bitcoin-dao executed-at proposal)) err-pr
                      (asserts! (match (get custom-majority data) majority (> majority u5000) true)
65
                      (print {event: "propose", proposal: proposal, proposer: tx-sender})
66
                      (ok (asserts! (map-insert proposals (contract-of proposal) (merge {votes-for:
67
              )
68
69
      )
70
71
      ;; --- Public functions
72
73
      ;; Proposals
74
75
      (define-read-only (get-proposal-data (proposal principal))
76
              (map-get? proposals proposal)
77
      )
78
79
      ;; Votes
80
81
      (define-read-only (get-current-total-votes (proposal principal))
              (default-to u0 (map-get? member-total-votes {proposal: proposal, voter: voter}))
82
83
      )
84
85
      (define-read-only (get-historical-values (height uint) (who principal))
              (at-block (unwrap! (get-block-info? id-header-hash height) none)
86
87
                      (some
                              {
88
89
                                     user-balance: (stx-get-balance who),
90
                                     voting-cap: vote-cap,
                                      ;;voting-cap: (contract-call? 'SP0000000000000000000002Q6VF78.
91
92
                             }
93
                      )
```

```
94
                )
 95
        )
 96
 97
        (define-public (vote (amount uint) (for bool) (proposal principal))
 98
                (let
                        (
99
                                (proposal-data (unwrap! (map-get? proposals proposal) err-unknown-prd
100
                                (new-total-votes (+ (get-current-total-votes proposal tx-sender) amout
101
102
                                (historical-values (unwrap! (get-historical-values (get start-height-
                        )
103
104
                        (asserts! (>= burn-block-height (get start-burn-height proposal-data)) err-pr
105
                        (asserts! (< burn-block-height (get end-burn-height proposal-data)) err-propo
                        (asserts!
106
107
                                (<= new-total-votes (get user-balance historical-values))</pre>
108
                                err-insufficient-voting-capacity
                        )
109
110
                        (asserts!
                                (< new-total-votes (get voting-cap historical-values))</pre>
111
112
                                err-exceeds-voting-cap)
113
                        (map-set member-total-votes {proposal: proposal, voter: tx-sender} new-total-
114
115
                        (map-set proposals proposal
116
                                (if for
                                        (merge proposal-data {votes-for: (+ (get votes-for proposal-d)
117
118
                                        (merge proposal-data {votes-against: (+ (get votes-against pr
119
                                )
120
121
                        (print {event: "vote", proposal: proposal, voter: tx-sender, for: for, amount
122
                        (ok true)
123
                )
124
        )
125
126
        ;; Conclusion
127
128
        (let
129
                        (
130
131
                                (proposal-data (unwrap! (map-get? proposals (contract-of proposal)) €
132
                                (passed
                                        (match (get custom-majority proposal-data)
133
134
                                                majority (> (* (get votes-for proposal-data) custom-n
                                                (> (get votes-for proposal-data) (get votes-against p
135
                                        )
136
                                )
137
138
139
                        (asserts! (not (get concluded proposal-data)) err-proposal-already-concluded)
                        (asserts! (>= burn-block-height (get end-burn-height proposal-data)) err-end-
140
                        (map-set proposals (contract-of proposal) (merge proposal-data {concluded: tr
141
142
                        (print {event: "conclude", proposal: proposal, passed: passed})
                        (and passed (try! (contract-call? .bitcoin-dao execute proposal tx-sender)))
143
144
                        (ok passed)
145
                )
        )
146
147
        ;; --- Extension callback
148
149
```

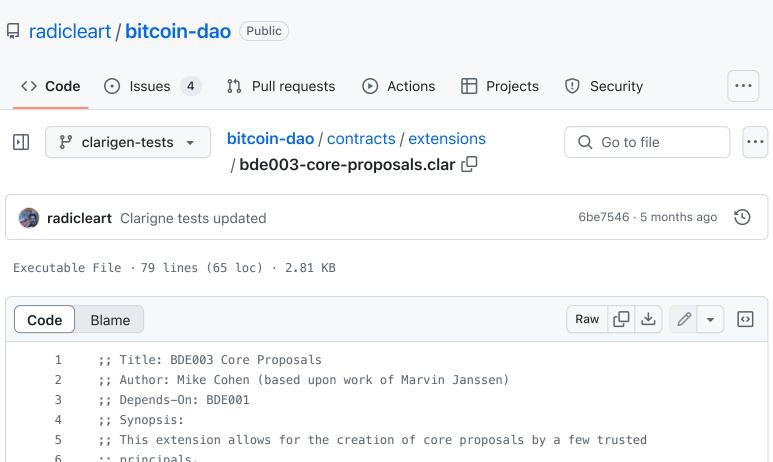
```
(define-public (callback (sender principal) (memo (buff 34)))
(ok true)
)
```



```
;; This extension part of the core of Bitcoin DAO. It allows members to
5
       ;; bring proposals to the voting phase by funding them with a preset amount
7
       ;; of tokens.
8
       ;; Description:
       ;; The level of funding is determined by a DAO parameter and can be changed by proposal.
9
       ;; Any funder can reclaim their stx up to the point the proposal is fully funded and submitte
10
       ;; Proposals can also be marked as refundable in which case a funder can reclaim their stx
11
       ;; even after submission (during or after the voting period).
12
       ;; This extension provides the ability for the final funding transaction to set a
       ;; custom majority for voting. This changes the threshold from the
14
       ;; default of 50% to anything up to 100%.
15
16
17
       (impl-trait .extension-trait.extension-trait)
       (use-trait proposal-trait.proposal-trait)
18
19
       (define-constant err-unauthorised (err u3100))
20
       (define-constant err-not-governance-token (err u3101))
21
22
       (define-constant err-insufficient-balance (err u3102))
       (define-constant err-unknown-parameter (err u3103))
23
       (define-constant err-proposal-minimum-start-delay (err u3104))
24
       (define-constant err-proposal-minimum-duration (err u3105))
25
       (define-constant err-already-funded (err u3106))
26
       (define-constant err-nothing-to-refund (err u3107))
27
       (define-constant err-refund-not-allowed (err u3108))
28
29
30
       (define-map refundable-proposals principal bool)
       (define-map funded-proposals principal bool)
31
32
       (define-map proposal-funding principal uint)
33
       (define-map funding-per-principal {proposal: principal, funder: principal} uint)
34
35
       (define-map parameters (string-ascii 30) uint)
36
       (map-set parameters "funding-cost" u500000) ;; funding cost in uSTX. 5 STX in this case.
37
```

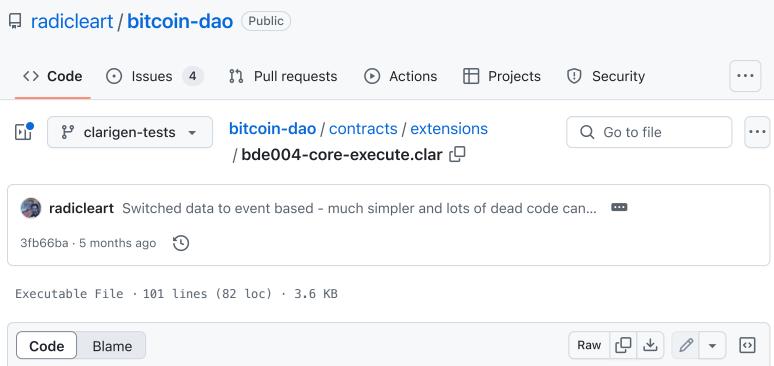
```
(map-set parameters "minimum-proposal-start-delay" u6) ;; eg 6 = ~1 hour minimum delay befor€
38
       (map-set\ parameters\ "minimum-proposal-duration"\ u72);; eg 72=\sim1/2 days minimum duration of
39
40
41
      ;; --- Authorisation check
42
      (define-public (is-dao-or-extension)
43
              (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
44
      )
45
46
47
      ;; --- Internal DAO functions
48
49
      ;; Proposals
50
      51
              (contract-call? .bde001-proposal-voting add-proposal
52
53
                      proposal
54
                      {
55
                              start-height-stacks: start-height-stacks,
                              start-burn-height: start-burn-height,
56
57
                              end-burn-height: (+ start-burn-height duration),
58
                              custom-majority: custom-majority,
                              proposer: tx-sender ;; change to original submitter
59
                      }
60
              )
61
      )
62
63
64
      ;; Parameters
65
       (define-public (set-parameter (parameter (string-ascii 30)) (value uint))
66
67
              (begin
                      (try! (is-dao-or-extension))
68
69
                      (try! (get-parameter parameter))
70
                      (ok (map-set parameters parameter value))
              )
71
      )
72
73
74
      ;; Refunds
75
      (define-public (set-refundable (proposal principal) (refundable bool))
76
77
78
                      (try! (is-dao-or-extension))
                      (ok (map-set refundable-proposals proposal refundable))
79
80
              )
      )
81
82
      ;; --- Public functions
83
84
85
      ;; Parameters
86
87
      (define-read-only (get-parameter (parameter (string-ascii 30)))
              (ok (unwrap! (map-get? parameters parameter) err-unknown-parameter))
88
89
      )
90
91
      ;; Funding status
92
93
      (define-read-only (is-proposal-funded (proposal principal))
```

```
94
                (default-to false (map-get? funded-proposals proposal))
 95
       )
 96
 97
       (define-read-only (get-proposal-funding (proposal principal))
                (default-to u0 (map-get? proposal-funding proposal))
 98
99
       )
100
        (define-read-only (get-proposal-funding-by-principal (proposal principal) (funder principal))
101
102
                (default-to u0 (map-get? funding-per-principal {proposal: proposal, funder: funder}))
       )
103
104
        (define-read-only (can-refund (proposal principal) (funder principal))
105
                (or
106
107
                       (default-to false (map-get? refundable-proposals proposal))
                       (and (not (is-proposal-funded proposal)) (is-eq funder tx-sender))
108
109
                )
110
       )
111
112
        ;; Proposals
113
        114
115
                (let
116
                       (
                               (proposal-principal (contract-of proposal))
117
118
                               (current-total-funding (get-proposal-funding proposal-principal))
119
                               (funding-cost (try! (get-parameter "funding-cost")))
                               (difference (if (> funding-cost current-total-funding) (- funding-cost
120
121
                               (funded (<= difference amount))</pre>
                               (transfer-amount (if funded difference amount))
122
123
124
                       (asserts! (not (is-proposal-funded proposal-principal)) err-already-funded)
                       (and (> transfer-amount u0) (try! (stx-transfer? transfer-amount tx-sender .t
125
                       (map-set funding-per-principal {proposal: proposal-principal, funder: tx-send
126
                       (map-set proposal-funding proposal-principal (+ current-total-funding transfe)
127
                       (asserts! funded (ok false))
128
                       (asserts! (>= start-delay (try! (get-parameter "minimum-proposal-start-delay")
129
                       (asserts! (>= duration (try! (get-parameter "minimum-proposal-duration"))) er
130
                       (map-set funded-proposals proposal-principal true)
131
132
                       (submit-proposal-for-vote proposal block-height (+ burn-block-height start-de
                )
133
       )
134
135
136
        (define-public (refund (proposal principal)) (funder (optional principal)))
                (let
137
                       (
138
139
                               (recipient (default-to tx-sender funder))
                               (refund-amount (get-proposal-funding-by-principal proposal recipient)
140
141
                       (asserts! (> refund-amount u0) err-nothing-to-refund)
142
                       (asserts! (can-refund proposal recipient) err-refund-not-allowed)
143
                       (map-set funding-per-principal {proposal: proposal, funder: recipient} u0)
144
                       (map-set proposal-funding proposal (- (get-proposal-funding proposal) refund-
145
                       (contract-call? .bde006-treasury stx-transfer refund-amount recipient none)
146
                )
147
       )
148
149
```



```
;; principals.
7
       ;; Description:
       ;; Only a list of trusted principals, designated as the
8
       ;; "core team", can create core proposals. The core proposal
       ;; extension has an optional ~3 month sunset period, after which no more core
10
       ;; proposals can be made - set it to 0 to disable. The core team members, sunset period, and
11
       ;; core vote duration can be changed by means of a future proposal.
13
14
       (impl-trait .extension-trait.extension-trait)
       (use-trait proposal-trait.proposal-trait)
15
16
17
       (define-data-var core-team-sunset-height uint u0) ;; does not expire by default - can be char
18
19
       (define-constant err-unauthorised (err u3300))
       (define-constant err-not-core-team-member (err u3301))
20
       (define-constant err-sunset-height-reached (err u3302))
21
22
       (define-constant err-sunset-height-in-past (err u3303))
23
       (define-constant err-proposal-minimum-start-delay (err u3304))
24
       (define-constant err-proposal-minimum-duration (err u3305))
25
26
       (define-map core-team principal bool)
27
       ;; --- Authorisation check
28
29
30
       (define-public (is-dao-or-extension)
               (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
31
32
33
       ;; --- Internal DAO functions
34
35
36
       (define-public (set-core-team-sunset-height (height uint))
37
               (begin
38
                       (try! (is-dao-or-extension))
                       (asserts! (> height hurn-block-height) err-sunset-height-in-past)
```

```
(ok (var-set core-team-sunset-height height))
40
              )
41
42
      )
43
      (define-public (set-core-team-member (who principal) (member bool))
44
45
              (begin
                      (try! (is-dao-or-extension))
46
                      (ok (map-set core-team who member))
47
              )
48
      )
49
50
51
      ;; --- Public functions
52
      (define-read-only (is-core-team-member (who principal))
53
              (default-to false (map-get? core-team who))
54
      )
55
56
57
      (begin
58
59
                      (asserts! (is-core-team-member tx-sender) err-not-core-team-member)
                      (asserts! (or (is-eq (var-get core-team-sunset-height) u0) (< burn-block-height)
60
                      (asserts! (>= start-burn-height (+ burn-block-height u2)) err-proposal-minimu
61
                      (asserts! (>= (+ start-burn-height duration) (+ burn-block-height u72)) err-r
62
                      (contract-call? .bde001-proposal-voting add-proposal proposal
63
64
65
                                     start-height-stacks: block-height,
                                     start-burn-height: start-burn-height,
66
                                     end-burn-height: (+ start-burn-height duration),
67
68
                                     custom-majority: custom-majority,
                                     proposer: tx-sender ;; change to original submitter
69
                             }
70
                      )
71
72
              )
      )
73
74
75
      ;; --- Extension callback
76
      (define-public (callback (sender principal) (memo (buff 34)))
77
              (ok true)
78
79
      )
```



```
1
       ;; Title: BDE004 Core Execute
2
       ;; Author: Mike Cohen (based on Marvin Janssen)
3
       ;; Depends-On:
4
       ;; Synopsis:
       ;; This extension allows a small number of very trusted principals to immediately
5
       ;; execute a proposal once a super majority is reached.
6
7
       ;; Description:
       ;; An extension meant for the bootstrapping period of a DAO. It temporarily gives
8
       ;; some very trusted principals the ability to perform an "executive action";
9
       ;; meaning, they can skip the voting process to immediately executive a proposal.
10
11
       ;; The Core execute extension has an optional sunset period of ~1 month from deploy
       ;; time, set it to 0 to disable. The core executive team, parameters, and sunset period may {f t}
12
       ;; by means of a future proposal.
13
14
       (impl-trait .extension-trait.extension-trait)
15
       (use-trait proposal-trait.proposal-trait)
16
17
       (define-data-var executive-team-sunset-height uint u0) ;; does not expire by default - can be
18
19
       (define-constant err-unauthorised (err u3400))
20
       (define-constant err-not-executive-team-member (err u3401))
21
       (define-constant err-already-executed (err u3402))
22
23
       (define-constant err-sunset-height-reached (err u3403))
       (define-constant err-sunset-height-in-past (err u3404))
24
25
26
       (define-map executive-team principal bool)
27
       (define-map executive-action-signals {proposal: principal, team-member: principal} bool)
       (define-map executive-action-signal-count principal uint)
28
29
30
       (define-data-var executive-signals-required uint u1) ;; signals required for an executive act
31
32
       ;; --- Authorisation check
33
34
       (define-public (is-dao-or-extension)
               (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
35
36
       )
```

37

```
38
       ;; --- Internal DAO functions
39
       (define-public (set-executive-team-sunset-height (height uint))
40
41
               (begin
42
                       (try! (is-dao-or-extension))
                       (asserts! (> height burn-block-height) err-sunset-height-in-past)
43
44
                       (ok (var-set executive-team-sunset-height height))
45
               )
       )
46
47
       (define-public (set-executive-team-member (who principal) (member bool))
48
49
               (begin
50
                       (try! (is-dao-or-extension))
51
                       (ok (map-set executive-team who member))
52
               )
       )
53
54
55
       (define-public (set-signals-required (new-requirement uint))
56
               (begin
57
                       (try! (is-dao-or-extension))
58
                       (ok (var-set executive-signals-required new-requirement))
               )
59
60
       )
61
62
       ;; --- Public functions
63
64
       (define-read-only (is-executive-team-member (who principal))
65
               (default-to false (map-get? executive-team who))
       )
66
67
       (define-read-only (has-signalled (proposal principal) (who principal))
68
69
               (default-to false (map-get? executive-action-signals {proposal: proposal, team-member
70
       )
71
72
       (define-read-only (get-signals-required)
73
               (var-get executive-signals-required)
       )
74
75
76
       (define-read-only (get-signals (proposal principal))
77
               (default-to u0 (map-get? executive-action-signal-count proposal))
       )
78
79
80
       (let
81
                       (
82
83
                               (proposal-principal (contract-of proposal))
                               (signals (+ (get-signals proposal-principal) (if (has-signalled propo
84
85
                       (asserts! (is-executive-team-member tx-sender) err-not-executive-team-member)
86
87
                       (asserts! (or (is-eq (var-get executive-team-sunset-height) u0) (< burn-block
                       (and (>= signals (var-get executive-signals-required))
88
                               (try! (contract-call? .bitcoin-dao execute proposal tx-sender))
89
                       )
90
91
                       (map-set executive-action-signals {proposal: proposal-principal, team-member:
92
                       (map-set executive-action-signal-count proposal-principal signals)
93
                       (ok signals)
```

```
94 )
95 )
96
97 ;; --- Extension callback
98
99 (define-public (callback (sender principal) (memo (buff 34)))
100 (ok true)
101 )
```

```
☐ radicleart / bitcoin-dao Public
                                                             Security
  <> Code
             • Issues 4
                             ?? Pull requests
                                               Actions
                             bitcoin-dao / contracts / extensions
 FI
       🗜 clarigen-tests 🔻
                                                                            Q Go to file
                              / bde006-treasury.clar 🖵
  🌉 radicleart Switched data to event based - much simpler and lots of dead code can... 🚥
 3fb66ba · 5 months ago
 Executable File · 157 lines (128 loc) · 4.95 KB
                                                                            Raw 🖵 🕹 🧷
   Code
           Blame
      1
            ;; Title: EDE006 Treasury
      2
            ;; Author: Mike Cohen (based upon work of Marvin Janssen)
            ;; Depends-On:
      3
      4
            ;; Synopsis:
            ;; A treasury that can manage STX, SIP009, SIP010, and SIP013 tokens.
      5
            ;; Description:
      6
```

```
7
       ;; An extension contract that is meant to hold tokens on behalf of the
       ;; DAO. It can hold and transfer STX, SIP009, SIP010, and SIP013 tokens.
 8
       ;; They can be deposited by simply transferring them to the contract.
 9
       ;; Any extension or executing proposal can trigger transfers.
10
       ;; Technically, the ExecutorDAO core can hold and transfer tokens
11
       ;; directly. The treasury extension merely adds a bit of separation.
12
13
       (impl-trait .extension-trait.extension-trait)
14
15
       (define-constant err-unauthorised (err u3000))
16
17
       ;; --- Transferable traits
18
19
       (define-trait sip009-transferable
20
21
                        (transfer (uint principal principal) (response bool uint))
22
               )
23
       )
24
25
       (define-trait sip010-transferable
26
27
                        (transfer (uint principal principal (optional (buff 34))) (response bool uint
28
               )
29
       )
30
31
       (define-trait sip013-transferable
32
33
34
                        (transfer (uint uint principal principal) (response bool uint))
                        (transfer-memo (uint uint principal principal (buff 34)) (response bool uint)
35
36
               )
37
```

```
38
39
       (define-trait sip013-transferable-many
40
                        (transfer-many ((list 200 {token-id: uint, amount: uint, sender: principal, r
41
42
                        (transfer-many-memo ((list 200 {token-id: uint, amount: uint, sender: princip
               )
43
       )
44
45
       ;; --- Authorisation check
46
47
48
       (define-public (is-dao-or-extension)
               (ok (asserts! (or (is-eq tx-sender .bitcoin-dao) (contract-call? .bitcoin-dao is-exte
49
       )
50
51
52
       ;; --- Internal DAO functions
53
54
       ;; STX
55
       (define-public (stx-transfer (amount uint) (recipient principal) (memo (optional (buff 34))))
56
57
               (begin
58
                        (try! (is-dao-or-extension))
                        (match memo to-print (print to-print) 0x)
59
60
                        (as-contract (stx-transfer? amount tx-sender recipient))
               )
61
       )
62
63
64
       (define-public (stx-transfer-many (transfers (list 200 {amount: uint, recipient: principal, n
65
               (begin
66
                        (try! (is-dao-or-extension))
                        (as-contract (fold stx-transfer-many-iter transfers (ok true)))
67
               )
68
69
       )
70
71
       ;; SIP009
72
73
       (define-public (sip009-transfer (token-id uint) (recipient principal) (asset <sip009-transfer
74
               (begin
75
                        (try! (is-dao-or-extension))
76
                        (as-contract (contract-call? asset transfer token-id tx-sender recipient))
77
               )
       )
78
79
80
       (define-public (sip009-transfer-many (data (list 200 {token-id: uint, recipient: principal}))
81
               (begin
82
                        (as-contract (fold sip009-transfer-many-iter data asset))
                        (ok true)
83
               )
84
85
       )
86
87
       ;; SIP010
88
89
       (define-public (sip010-transfer (amount uint) (recipient principal) (memo (optional (buff 34)
               (begin
90
                        (try! (is-dao-or-extension))
91
92
                        (as-contract (contract-call? asset transfer amount tx-sender recipient memo))
93
               )
```

```
94
        )
 95
 96
        (define-public (sip010-transfer-many (data (list 200 {amount: uint, recipient: principal, men
 97
                (begin
 98
                         (as-contract (fold sip010-transfer-many-iter data asset))
 99
                         (ok true)
                )
100
        )
101
102
        ;; SIP013
103
104
105
        (define-public (sip013-transfer (token-id uint) (amount uint) (recipient principal) (memo (or
                (begin
106
107
                         (try! (is-dao-or-extension))
108
                         (as-contract (match memo memo-buff
                                 (contract-call? asset transfer-memo token-id amount tx-sender recipie
109
110
                                 (contract-call? asset transfer token-id amount tx-sender recipient)
111
                        ))
112
                )
113
        )
114
115
        (define-public (sip013-transfer-many (transfers (list 200 {token-id: uint, amount: uint, send
116
                (begin
                         (try! (is-dao-or-extension))
117
118
                         (as-contract (contract-call? asset transfer-many transfers))
119
                )
120
        )
121
122
        (define-public (sip013-transfer-many-memo (transfers (list 200 {token-id: uint, amount: uint,
123
                (begin
124
                         (try! (is-dao-or-extension))
125
                         (as-contract (contract-call? asset transfer-many-memo transfers))
126
                )
        )
127
128
129
        ;; --- Iterator functions
130
131
        (define-private (stx-transfer-many-iter (data {amount: uint, recipient: principal, memo: (opt
132
                (begin
133
                         (try! previous-result)
134
                         (match (get memo data) to-print (print to-print) 0x)
                         (stx-transfer? (get amount data) tx-sender (get recipient data))
135
136
                )
137
        )
138
139
        (define-private (sip009-transfer-many-iter (data {token-id: uint, recipient: principal}) (ass
                (begin
140
141
                         (unwrap-panic (contract-call? asset transfer (get token-id data) tx-sender (d
142
                        asset
                )
143
144
        )
145
146
        (define-private (sip010-transfer-many-iter (data {amount: uint, recipient: principal, memo: (
147
                (begin
148
                         (unwrap-panic (contract-call? asset transfer (get amount data) tx-sender (get
                        asset
149
```

```
150 )
151 )
152
153 ;; --- Extension callback
154
155 (define-public (callback (sender principal) (memo (buff 34)))
156 (ok true)
157 )
```