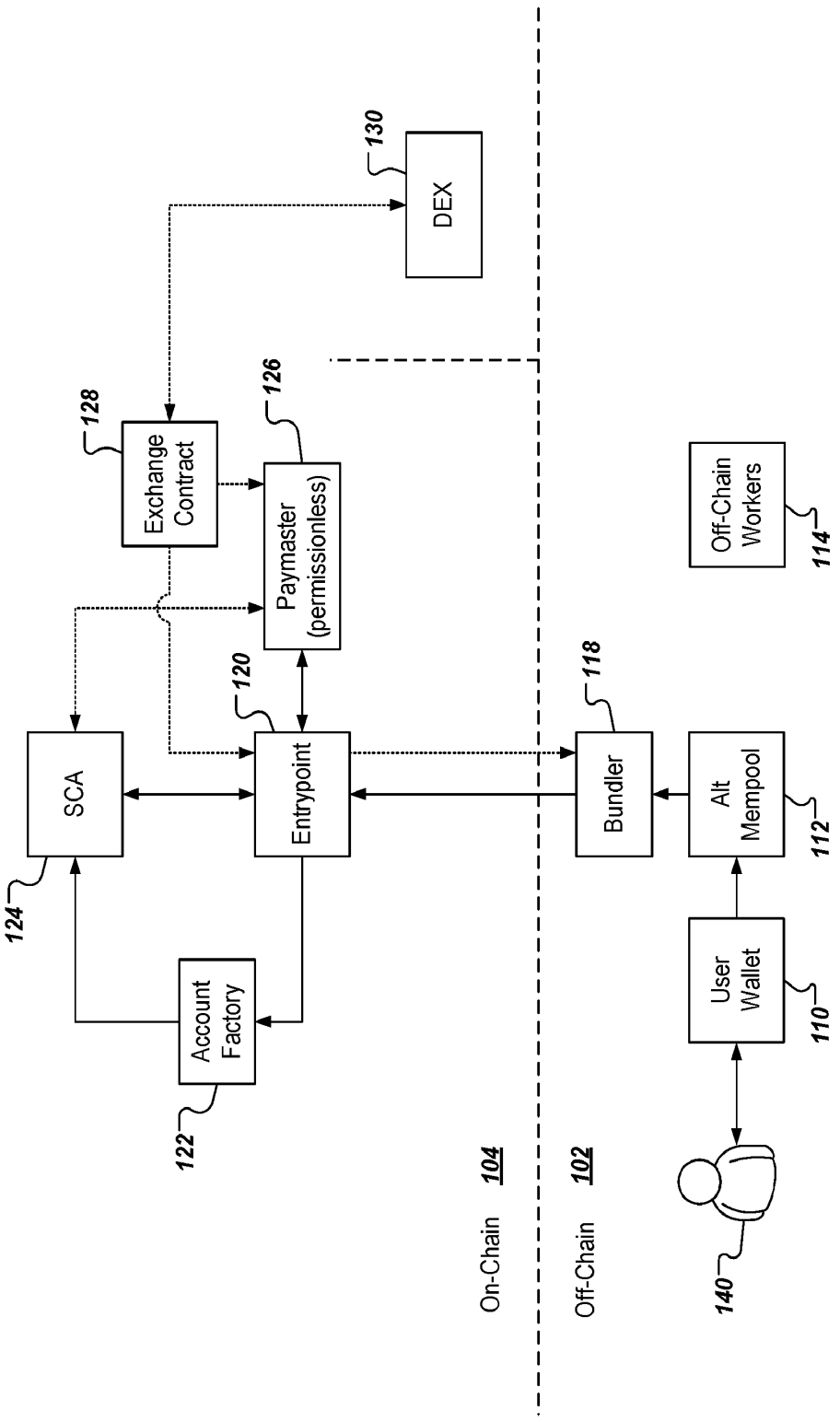

DEX
130
Exchange Contract
128
Paymaster (permissionless)
126
Off-Chain Workers
114
SCA
124
Entrypoint
120
Bundler
118
Alt Mempool
112
Account Factory
122
User Wallet
110
140
On-Chain 104
Off-Chain 102

FIG. 1

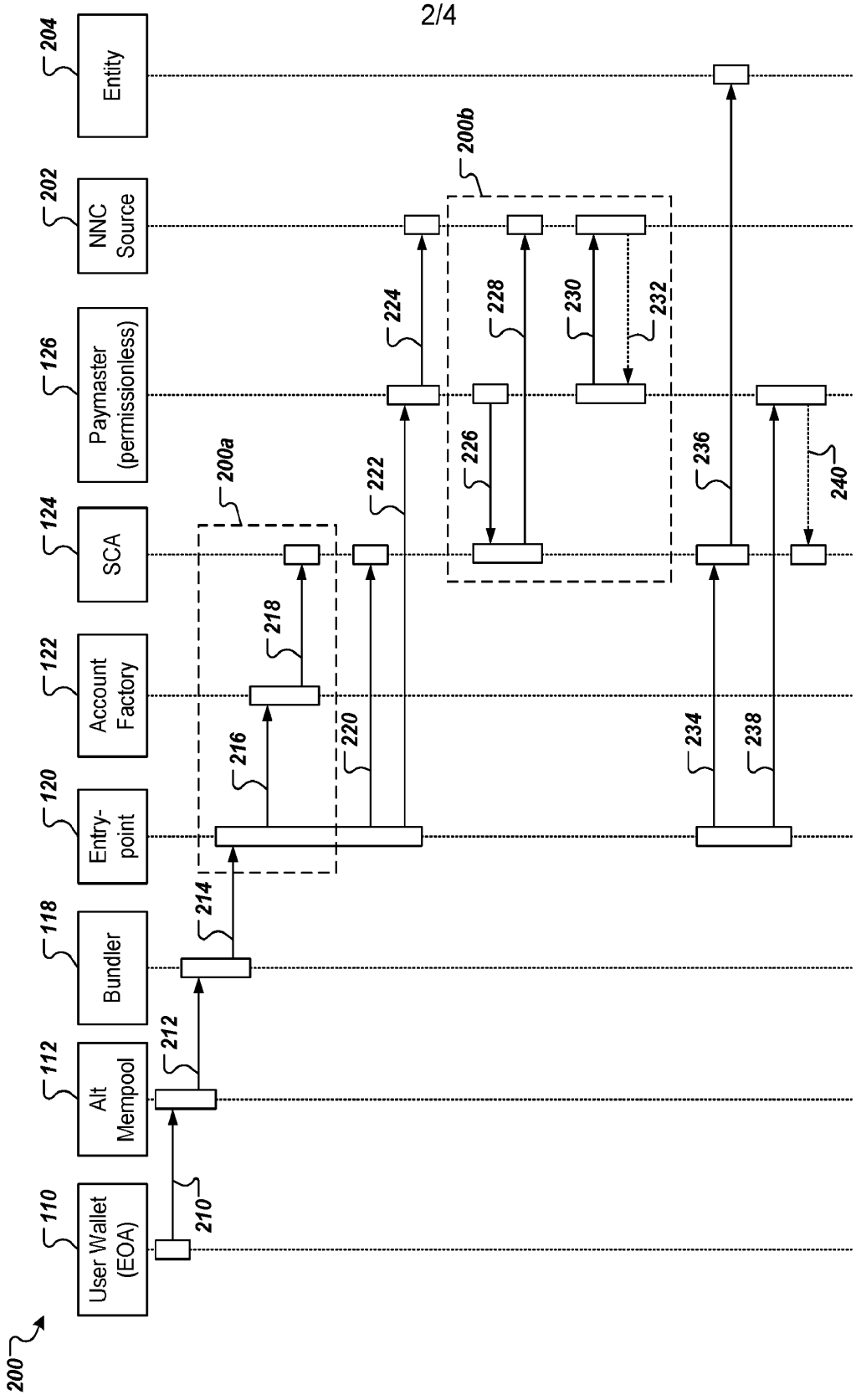

200
User Wallet (EOA)
110
Alt Mempool
112
Bundler
118
Entry-point
120
Account Factory
122
SCA
124
Paymaster (permissionless)
126
NNC Source
202
Entity
204
200a
200b
210
212
214
216
218
220
222
224
226
228
230
232
234
236
238
240

FIG. 2

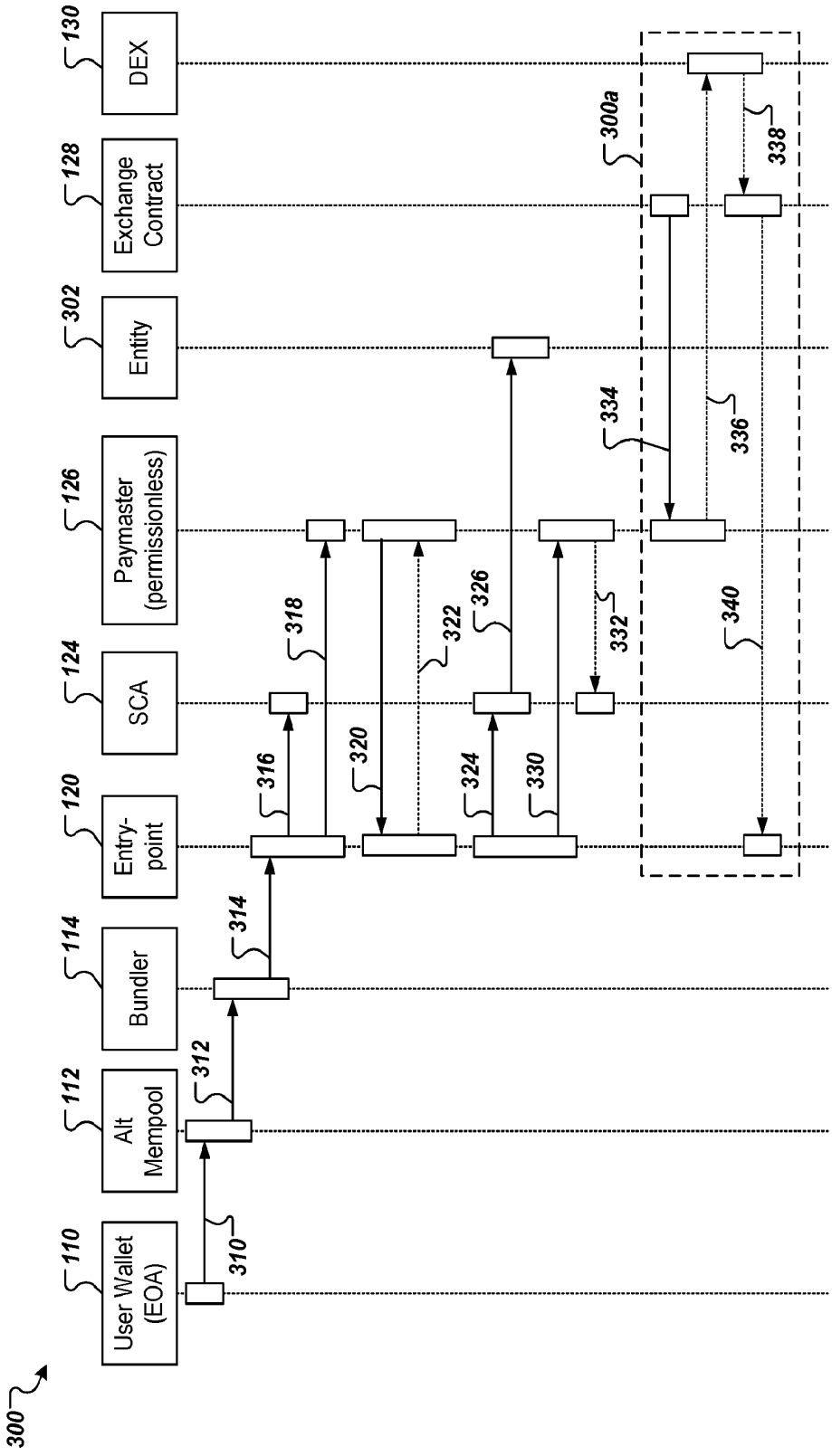

300
User Wallet (EOA)
110
Alt Mempool
112
Bundler
114
Entry-point
120
SCA
124
Paymaster (permissionless)
126
Entity
302
Exchange Contract
128
DEX
130
310
312
314
316
318
320
322
324
326
330
332
334
336
338
340
300a

FIG. 3

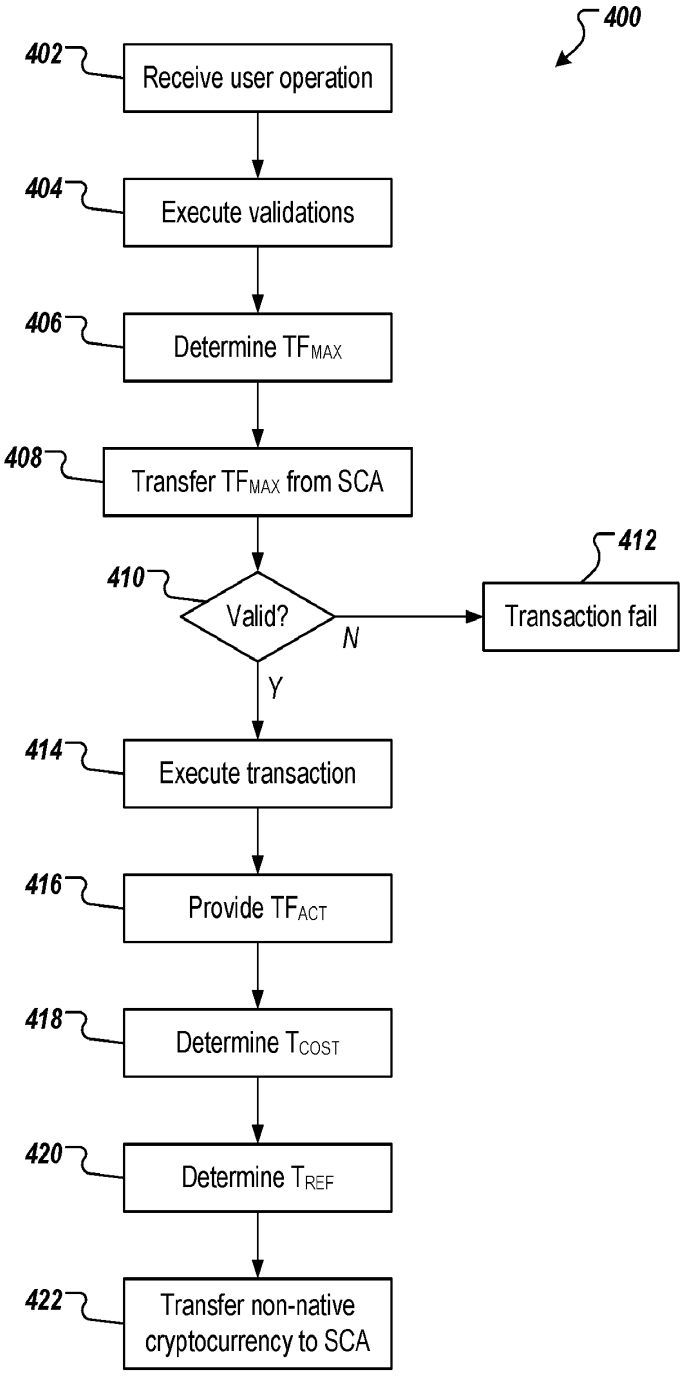

400
402
Receive user operation
404
Execute validations
406
Determine TF_{MAX}
408
Transfer TF_{MAX} from SCA
410
Valid?
N
412
Transaction fail
Y
414
Execute transaction
416
Provide TF_{ACT}
418
Determine T_{COST}
420
Determine T_{REF}
422
Transfer non-native cryptocurrency to SCA

FIG. 4