

Patract Hub's | Europa (sandbox) v0.2 | intake review report

Reference Links

- [Post #250 | Patract Hub's treasury report for Europa v0.2 \(contract and runtime sandbox\)](#)
 - [Treasury #27 | Patract Hub's treasury proposal for Europa \(sandbox\) v0.2](#)
 - [patractlabs/europa: A sandbox to run and debug smart contracts for FRAME Contracts pallet and also a sandbox framework for Substrate runtime.](#)
 - [atenjin/redspot-ink-example at chain_define_balance_u64](#)
 - [Review Form](#)
-

Validation Setup

Components	Discp
rustc	rustup install nightly-2021-03-03
substrate-v3.0.0-1	Release Europa for substrate v3.0.0 version, set larger MaxCodeSize
For testing use-case 2.2.3	Release Asset
Europa v0.2 release baselined branch	Release Branch
redspot-ink-example	Redspot-ink-example [master, origin/duplicate_topics, origin/chain_define_balance_u64]

Validation Summary

- Europa v0.2 functionality deliverables

Req-ID	Use-case	Status
2.2.1	Case 1: Simple case	Works
2.2.2	Case 2: ContractTrap, Duplicate Topics	Works
2.2.3	Case 3: When error is caused by the chain using type Balance=u64 instead of type Balance=u128	Works
1.3	Contract Log functions	Works
1.3	Contract panic functions	Works

> 2.2.1 | Case 1: Simple case | Passed

Redspot CLI Trace

```

redspot-ink-example > npx redspot console --no-compile
Welcome to Node.js v14.16.1.
Type ".help" for more information.
> var factory = await patract.getContractFactory('erc20')
2021-04-23 08:42:52      API/INIT: RPC methods not decorated: europa_backwardToHeight, europa_forwardToHeight, europa_modifiedStateKvs
undefined
> var contract = await factory.deployed('new', '1000000', {value: 20000000000, salt:1})
deployedAddress: 16nCUYDMQ13LjflJpoABoAfQnmuQ623HJatuCRoZ2RHPFhXA
undefined
> await contract.transfer("5GcTYx4dPTQfi4udKPvE4VKmbooV7zY6hNYVF9JXHJL4knNF", 100)
{
  from: '15oF4uVJwmo4Td6W7VfQxNLavjCXviqxT9S1MgbjMNHr65p5',
  txHash: '0xdedaeca909c75b4309f3ac0053b2d6c5d22e20309047c77b2d4861dcda1aa01',
  blockHash: '0x1654f5ce71ab000db91aed8bb599f41ca1aa302d398fecca7763b43e92e13a13',
  result: SubmittableResult {
    dispatchError: undefined,
    dispatchInfo: Type(3) [Map] {
      'weight' => [Type],
      'class' => [Type],
      'paysFee' => [Type],
      registry: [TypeRegistry],
      createdAtHash: undefined,
      weight: [Getter],
      class: [Getter],
      paysFee: [Getter]
    },
    events: [ [Type [Map]], [Type [Map]] ],
    status: Type {
      registry: [TypeRegistry],
      createdAtHash: undefined,
      isFuture: [Getter],
      asFuture: [Getter],
      isReady: [Getter],
      asReady: [Getter],
      isBroadcast: [Getter],
      asBroadcast: [Getter],
      isInBlock: [Getter],
      asInBlock: [Getter],
      isRetracted: [Getter],
      asRetracted: [Getter],
      isFinalityTimeout: [Getter],
      asFinalityTimeout: [Getter],
      isFinalized: [Getter],
      asFinalized: [Getter],
      isUsurped: [Getter],
      asUsurped: [Getter]
    }
  }
}

```

Europa v0.2 Trace

> 2.2.2 | Case 2: ContractTrap Duplicate Topics | Passed

Redspot CLI Trace

```

redspot-ink-example ➤ npx redspot console --no-compile
git:42a42da
Welcome to Node.js v14.16.1.
Type ".help" for more information.
> var factory = await patract.getContractFactory('erc20')
2021-04-23 10:00:40      API/INIT: RPC methods not decorated: europa_backwardToHeight, europa_forwardToHeight, europa_modifiedStateKvs
undefined
> var contract = await factory.deployed('new', '10000000', {value: 20000000000, salt:4})
deployedAddress: 134fg5Y5xQjy8dHE7E6UtCvnRCxFnrKwirMYX3H9hNXVegvz

[ERROR] contracts.DuplicateTopics
10:00:55

Uncaught RedspotPluginError: Instantiation failed
    at ContractFactory.deploy (/home/kanthasiva/dscbox/sun/ws-020-blocks/ws-017-europa/treas-v0.2-intake/tst-ws/redspot-ink-example/node_modules/@redspot/patract/contractFactory.js:236:31)
    at ContractFactory.instantiateWithCode (/home/kanthasiva/dscbox/sun/ws-020-blocks/ws-017-europa/treas-v0.2-intake/tst-ws/redspot-ink-example/node_modules/@redspot/patract/contractFactory.js:186:28)
    at /home/kanthasiva/dscbox/sun/ws-020-blocks/ws-017-europa/treas-v0.2-intake/tst-ws/redspot-ink-example/node_modules/@redspot/patract/contractFactory.js:191:23
>

```

Europa v0.2 Trace

[illegible]

> 2.2.3 | Case 3: When error is caused by the chain using type Balance=u64 instead of type Balance=u128 | Passed

polkadot.js.org/apps

Development
version 1
#1
Accounts
Network
Developer
Settings

!!! Explorer
Chain info
Block details
Node info

block hash or number to query

1	hash	parent	extrinsics	state
	0xef2b485afabb084cb5050...	0xb23f4f7c61f978336b1ad...	0x8de68c8d7a6c6dfd13394...	0x5cfc12c391cf92d695c6e...

extrinsics

timestamp.set

Set the current time.

contracts.instantiateWithCode

Instantiates a new contract from the supplied code optionally transferring some balance.

events

system.ExtrinsicSuccess

An extrinsic completed successfully. *[info]*

undefined.undefined

undefined.undefined

undefined.undefined

undefined.undefined

undefined.undefined

system.NewAccount

A new *[account]* was created.

AccountId

15Tgxz...qikP9T

15TgxzEG1o1hS3D03MKCeP...

balances.Endowed

An account was created with some free balance. *[account, free_balance]*

signer

ALICE index 0

system events

No events available

logs

No logs available

Development
version 1
#1
Accounts
Network
Developer
Settings

Contracts

Contracts

addresses

1

code hashes

1

contracts

1

+ Upload & deploy code
+ Add an existing code hash
+ Add an existing contract

contracts

status

projection

ERC20-V3

Messages (6)

exec

approve (spender: AccountId, value: Balance): Result<(), Error>

Allows 'spender' to withdraw from the caller's account multiple times, up to

exec

transfer (to: AccountId, value: Balance): Result<(), Error>

Transfers 'value' amount of tokens from the caller's account to account 'to'.

exec

transferFrom (from: AccountId, to: AccountId, value: Balance): Result<(), Error>

Transfers 'value' tokens on the behalf of 'from' to the account 'to'.

99.9868 DOT

Alive

12 hrs 31 mins

#7,520

read

allowance (owner: AccountId, spender: AccountId): Balance

Returns the amount which 'spender' is still allowed to withdraw from 'owner'.

read

balanceOf (owner: AccountId): Balance

Returns the account balance for the specified 'owner'.

read

totalSupply (): Balance

Returns the total token supply.

Development
version 1
#2
Accounts
Network
Developer
Settings

Contracts

Contracts

addresses

1

code hashes

1

contracts

1

+ Upload & deploy code
+ Add an existing code hash
+ Add an existing contract

contracts

status

projection

ERC20-V3

Messages (6)

#2

exec

approve (spender: AccountId, value: Balance): Result<(), Error>

Allows 'spender' to withdraw from the caller's account multiple times, up to

exec

transfer (to: AccountId, value: Balance): Result<(), Error>

Transfers 'value' amount of tokens from the caller's account to account 'to'.

exec

transferFrom (from: AccountId, to: AccountId, value: Balance): Result<(), Error>

Transfers 'value' tokens on the behalf of 'from' to the account 'to'.

99.9737 DOT

Alive

12 hrs 31 mins

#7,520

read

allowance (owner: AccountId, spender: AccountId): Balance

Returns the amount which 'spender' is still allowed to withdraw from 'owner'.

Dismiss all notifications

contracts.call inblock

system.ExtrinsicFailed contracts.ContractTrapped

Europa v0.2 Trace

[illegible][illegible]

```

2021-04-23 10:34:11 🟡 Prepared block for proposing at 2 [hash: 0xa03be8d88db3065ece9bcab08dcac0d0b2262d4b8cc371c9ac4b7f26478cc085; parent.
hash: 0xef2b1f1b; extrinsics (2): [0x658c..325f, 0x072a..8180]]
2021-04-23 10:34:11 Instant Seal success: CreatedBlock { hash: 0xa03be8d88db3065ece9bcab08dcac0d0b2262d4b8cc371c9ac4b7f26478cc085, aux: Imp
ortedAux { header_only: false, clear_justification_requests: false, needs_justification: false, bad_justification: false, is_new_best: true
} }
1: NestedRuntime {
  ext result: [failed] ExecError { error: DispatchError::Module { index: 5, error: 17, message: Some("ContractTrapped") }, origin: ErrorO
igin::Caller },
  caller: 0000000000000000000000000000000000000000000000000000000000000000 (5C4hrfjw...),
  self_account: c54bd97754a5dd4b3d1206fe0ca6ddca7ce33d874c6ce800dcc9f5850dfe2dea (5GXPpeyC...),
  selector: 0xdc736b5,
  args: None,
  value: 0,
  gas_limit: 4999999999999,
  gas_left: 4999898281340,
  env_trace: [
    seal_value_transferred(Some(0x0000000000000000)),
  ],
  wasm_error: Error::Trap(
    Trap {
      code: TrapCode::UnreachableCodeReached,
      trace: [
        "wasm trap: unreachable",
        "wasm backtrace:",
        "  0: 0x34923 - <unknown>!core::panicking::panic_fmt::h45e77d3a22c03dc8.55",
        "  1: 0x16f5a - <unknown>!core::result::unwrap_failed::h1c4ae2ae9997468e",
        "  2: 0x170b5 - <unknown>!core::result::Result<T,E>::expect::h8ff6ed9f5881d037",
        "  3: 0x31c3b - <unknown>link_lang::dispatcher::deny_payment::h76b6499ae9070b18",
        "  4: 0x331c1 - <unknown>!call",
        "  5: 0x445a3 - <unknown>!<wasm function 2663>",
        "note: run with `WASMTIME_BACKTRACE_DETAILS=1` environment variable to display more information",
        "",
      ],
    },
  ),
  nest: [],
}

```

Minor Observations

> Nice to have request, Improvement in Contract Trap error message

[Issue #62 | Treasury | Europa v0.2 | Intake review | Nice to have request, Improvement in Contract Trap error message | patractlabs/europa](#)

Request to improve the verbose in contract Trap error message, something like

"This Trap X is due to this Y". Discussed with Patract team, looks like

This feature has dependency on "wasm executor", and the team has plan to add this in future milestones.


↓Download image.png (105.47 KB)

May be noob question

With respect to "ContractTrapped" error message

Is there any possibility, like improving verbose message, like more specific

"This Trap X is due to this Y"

 **Aten | Patract**

add WASMTIME_BACKTRACE_DETAILS=1

"This Trap X is due to this Y" this information should come from wasm executor

maybe we could improve this in following version


in fact you notice this "wasm trap:", this is the error information from wasm executor

if the wasm executor carry more information, then we could show more

for example using wasmtime has more details then wasmi (edited)

but we also have some work to do with this.

Thanks for your advices, we may do more thing in next version

 **shamb0 | nodle.io**

10:43 Great Nice to here this.

Polkadot.