```
--- a/.github/workflows/pull_ci.yml
+++ /dev/null
@@ -1,52 +0,0 @@
-name: PR CI
 -on: [pull_request]
 -jobs:
         name: Lint
          runs-on: ubuntu-18.04
                uses: actions/checkout@v2
name: golangci-lint
uses: golangci/golangci-lint-action@v2
               with:
                    version: latest
                  working-directory:
args: --timeout 3m
         name: Golang Unit Tests v${{ matrix.go }} (${{ matrix.os }})
         name: Gotang Unit Tests V:
runs-on: ${{ matrix.os }}
strategy:
matrix:
go: ['1.16']
os: [ubuntu-20.04]
         steps:
          - uses: actions/checkout@v2
- uses: actions/setup-go@v1
with:
          go-version: ${{ matrix.go }}
- run: go mod download
shell: bash
            run: ./scripts/build.sh evm
shell: bash
run: ./scripts/build_test.sh
shell: bash
         name: Golang E2E Tests v${{ matrix.go }} (${{ matrix.os }})
          runs-on: ${{ matrix.os }}
strategy:
matrix:
               go: [ '1.16' ]
os: [ ubuntu-20.04 ]
         steps:
            uses: actions/checkout@v2
uses: actions/setup-go@v1
with:
          go-version: ${{ matrix.go }} - run: .github/workflows/run_e2e_tests.sh --parallelism 1 --client-id $KURTOSIS_CLIENT_ID --client-secret $KURTOSIS_CLIENT_SECRET shell: bash
            smett: dash
env:

DOCKER_USERNAME: ${{ secrets.DOCKER_USERNAME }}

DOCKER_PASS: ${{ secrets.DOCKER_DASS }}

KURTOSIS_CLIENT_ID: ${{ secrets.KURTOSIS_CLIENT_ID }}

KURTOSIS_CLIENT_SECRET: ${{ secrets.KURTOSIS_CLIENT_SECRET }}}
diff --git a/.github/workflows/push_ci.yml b/.github/workflows/push_ci.yml deleted file mode 100644 index lac73f1..0000000 --- a/.github/workflows/push_ci.yml
+++ /dev/null
@@ -1,52 +0,0 @@
-name: Branch Push CI
-on: [push]
 -jobs:
     lint:
         name: Lint
runs-on: ubuntu-18.04
         steps:
                uses: actions/checkout@v2
            - uses: golangci-lint
uses: golangci-loudingci-lint-action@v2
with:
version: latest
                   working-directory:
args: --timeout 3m
         est:
name: Golang Unit Tests v${{ matrix.go }} (${{ matrix.os }})
runs-on: ${{ matrix.os }}
strategy:
            matrix:
         matrix:
    go: ['1.16']
    os: [macos-11.0, ubuntu-18.04, ubuntu-20.04, windows-latest]
steps:
    uses: actions/checkout@v2
    uses: actions/setup-go@v1
            with:
          with:
    go.version: ${{ matrix.go }}
- run: go mod download
    shell: bash
    run: ./scripts/build.sh evm
    shell: bash
             run: ./scripts/build_test.sh
shell: bash
         ze:
name: Golang E2E Tests v${{ matrix.go }} (${{ matrix.os }})
runs-on: ${{ matrix.os }}
strategy:
            matrix:
go: [ '1.16' ]
os: [ ubuntu-20.04 ]
           - uses: actions/checkout@v2
            uses: actions/setup-go@vlwith:
          wxtn:
    go-version: ${{ matrix.go }}
- run: .github/workflows/run_e2e_tests.sh --parallelism 1 --client-id $KURTOSIS_CLIENT_ID --client-secret $KURTOSIS_CLIENT_SECRET
shell: bash
             env:
- env:

DOCKER_USERNAME: ${{ secrets.DOCKER_USERNAME }}

DOCKER_PASS: ${{ secrets.DOCKER_PASS }}

KURTOSIS_CLIENT_ID: ${{ secrets.KURTOSIS_CLIENT_ID }}

KURTOSIS_CLIENT_SECRET: ${{ secrets.KURTOSIS_CLIENT_SECRET }}

diff --git a/.github/workflows/run_e2e_tests.sh b/.github/workflows/run_e2e_tests.sh deleted file mode 100755
undex 04f297f..0000000
--- a/.github/workflows/run_e2e_tests.sh
+++ /dev/null
@@ -1,86 +0,0 @@
-set -o errexit
 -set -o nounset
-# If Docker Credentials are not available fail
-if [[ -z ${DOCKER_USERNAME} ]]; then
- echo "Skipping Tests because Docker Credentials were not present."
         exit 1
-# Testing specific variables
```

```
-avalanche_testing_repo="avaplatform/avalanche-testing"
-avalanchego repo="avaplatform/avalanchego"
-# Define default avalanche testing version to use
-avalanche_testing_image="${avalanche_testing_repo}:master"
 -# Avalanche root directory
 -CORETH_PATH=$( cd "$( dirname "${BASH_SOURCE[0]}" )"; cd ../.. && pwd )
-# Load the versions
-source "$CORETH_PATH"/scripts/versions.sh
-# Load the constants
 -source "$CORETH_PATH"/scripts/constants.sh
-# Login to docker
-echo "$DOCKER_PASS" | docker login --username "$DOCKER_USERNAME" --password-stdin
 -# Checks available docker tags exist
 -function docker_tag_exists() {
- TOKEN=$(curl -s -H "Content-Type: application/json" -X POST -d '{"username": "'${DOCKER_USERNAME}'", "password": "'${DOCKER_PASS}'"}' https://hub.docker.com/v2/users/login/ | jq -r .token)
- curl --silent -H "Authorization: JWT ${TOKEN}}" -f --head -lL https://hub.docker.com/v2/repositories/$1/tags/$2/ > /dev/null
-# Defines the avalanche-testing tag to use
-# Either uses the same tag as the current branch or uses the default
-if docker_tag_exists $avalanche_testing_repo $current_branch; then
- echo "$avalanche_testing_repo:$current_branch exists; using this image to run e2e tests"
- avalanche_testing_image="$avalanche_testing_repo:$current_branch"
         echo "$avalanche_testing_repo $current_branch does NOT exist; using the default image to run e2e tests"
 -fi
-echo "Using $avalanche testing image for e2e tests"
-# Defines the avalanchego tag to use
-# Either uses the same tag as the current branch or uses the default
-# Disable matchup in favor of explicit tag
-# TODO re-enable matchup when our workflow better supports it.
-# if docker_tag_exists $avalanchego_repo $current_branch; then
-# echo "Savalanchego repo: $current branch exists; using this avalanchego image to run e2e tests"
-# AVALANCHE_VERSION=$current_branch
-# else
-# echo "$avalanchego_repo $current_branch does NOT exist; using the default image to run e2e tests"
-# fi
 -# pulling the avalanche-testing image
-docker pull $avalanche_testing_image
 -# Setting the build ID
 -git_commit_id=$( git rev-list -1 HEAD )
-# Build current avalanchego
-source "$CORETH_PATH"/scripts/build_image.sh
-# Target built version to use in avalanche-testing -avalanche_image="avaplatform/avalanchego:$build_image_id"
-
-ccho "Running Avalanche Image: ${avalanche_image}"
-echo "Running Avalanche Testing Image: ${avalanche_testing_image}"
-echo "Git Commit ID : ${git_commit_id}"
 -# >>>>>> avalanche-testing custom parameters <<<<<<
-ustom_params_json="{
- \"isKurtosisCoreDevMode\": false,
- \"avalanchegoImage\":\"${avalanche_image}\",
         \"testBatch\":\"avalanchego\"
-}"
-# >>>>> avalanche-testing custom parameters <<<<
-bash "$CORETH_PATH/.kurtosis/kurtosis.sh" \
- -tests "C-Chain Bombard WorkFlow" \
- -custom-params "${custom_params_json}" \
- "${avalanche_testing_image}" \
diff --git a/.gitignore b/.gitignore index 87ff040..f3d6549 100644
--- a/.gitignore
+++ b/.gitignore
@@ -1,46
-./main
-*.log
 -.DS_Store
-awscpu
-# Binaries for programs and plugins
-*.exe
-*.exe~
-*.dll
-*.so
-*.dylib
-*.profile
-# Test binary, build with `go test -c`
-*.test
-# Output of the go coverage tool, specifically when used with LiteIDE
-# ignore GoLand metafiles directory
-.idea/
-*logs/
 -.vscode*
-*.pb*
-*cpu[0-9]*
-*mem[0-9]*
-*lock[0-9]*
-*.profile
-*.swp
-*.swp
-*.aux
-*.fdb*
-*.fls
-*.gz
-*.pdf
 -.coverage
 -
-bin/
-build/
+/build/
+/DUILO/
No newline at end of file
diff --git a/.kurtosis/kurtosis.sh b/.kurtosis/kurtosis.sh
deleted file mode 100755
index a3d1cd8.0000000
--- a/.kurtosis/kurtosis.sh
+++ /dev/null
@@ -1,226 +0,0 @@
```

```
Do not modify this file! It will get overwritten when you upgrade Kurtosis!
-set -euo pipefail
                                                              Constants
-KURTOSIS CORE TAG="1.8"
-NONTONIS_CONCENUB_ORG="Kurtosistech"
-INITIALIZER_IMAGE="${KURTOSIS_DOCKERHUB_ORG}/kurtosis-core_initializer:${KURTOSIS_CORE_TAG}"
-API__MAGE="${KURTOSIS_DOCKERHUB_ORG}/kurtosis-core_api:${KURTOSIS_CORE_TAG}"
-POSITIONAL ARG_DEFINITION_FRAGMENTS=2
                                                             Arg Parsing
...
-function print_help_and_exit() {
       echo "$(basename "${0}") [--custom-params custom_params_json] [--client-id client_id] [--client-secret client_secret] [--help] [--kurtosis-log-level kurtosis_log_level] [--list] [--parallelism paral
       echo
                                                                                            JSON string containing arbitrary data that will be passed as-is to your testsuite, so it can modify its behaviour based on input (default: {})"
An OAuth client ID which is needed for running Kurtosis in CI, and should be left empty when running Kurtosis on a local machine"
An OAuth client secret which is needed for running Kurtosis in CI, and should be left empty when running Kurtosis on a local machine"
                   --custom-params custom_params_json
--client-id client_id
--client-secret client_secret
--help
       echo "
       echo "
                                                                                            Display this message"
The log level that all output generated by the Kurtosis framework itself should log at (panic|fatal|error|warning|info|debug|trace) (default: in Rather than running the tests, lists the tests available to run."
The number of texts to execute in parallel (default: 4)"
List of test names to run, separated by ',' (default or empty: run all tests)"
A string that will be passed as-is to the test suite container to indicate what log level the test suite container should output at; this string The Docker image containing the testsuite to execute"
                   --kurtosis-log-level kurtosis_log_level
       echo
       echo "
                   --test --test test_names
--test-suite-log-level test_suite_log_level
       echo "
       echo "
                   test_suite_image
       exit 1 # Exit with an error code, so that if it gets accidentally called in parent scripts/CI it fails loudly
                                                              Arg Parsing
client_id=""
-client_secret=""
 -custom_params_json="{}"
-do_list="false"
-uc_tist= fatse
-kurtosis_log_level="info"
-parallelism="4"
-show_help="false"
-test names=
-test_suite_image=""
-test_suite_log_level="info"
-POSITIONAL=()
-while [ ${#} -gt 0 ]; do
- key="${1}"
- case "${key}" in
             --custom-params)
                   custom_params_json="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
              --client-id)
                   client_id="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
               -client-secret)
                   client_secret="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
               --help)
                    show_help="true"
shift # Shift to clear out the flag
                   shift
              --kurtosis-log-level)
                   kurtosis_log_level="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
             --list)
do_list="true"
shift # Shift to clear out the flag
              --parallelism)
                    parallelism="${2}"
                   parattetis≡="${2}"
shift # Shift to clear out the flag
shift # Shift again to clear out the value
                    test_names="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
              --test-suite-log-level)
                   test_suite_log_level="${2}"
shift  # Shift to clear out the flag
shift  # Shift again to clear out the value
```

echo "ERROR: Unrecognized flag '\${key}'" >&2

```
exit 1
                         POSITIONAL+=("${1}")
                         shift
-if "${show_help}"; then
        print help and exit
-fi
--
# Restore positional parameters and assign them to variables
-set -- "${POSITIONAL[@]}"
-test_suite_image="${1:-}"
                                                                          Arg Validation
-if [ "${#}" -ne 1 ]; then
- echo "ERROR: Expected 1 positional variables but got ${#}" >&2
         print_help_and_exit
-if [ -z "$test_suite_image" ]; then

- echo "ERROR: Variable 'test_suite_image' cannot be empty" >62

- exit 1
                                                                          Main Logic
                                                                                                                                                # used, we need to pull the latest API & initializer images
-echo "Pulling latest versions of API & initializer image..."
-if! docker pull "${INITIALIZER_IMAGE}"; then
- echo "WARN: An error occurred pulling the latest version of the initializer image (${INITIALIZER_IMAGE}); you may be running an out-of-date version" >&2
 -else
         echo "Successfully pulled latest version of initializer image'
 -if! docker pull "${API_IMAGE}"; then
- echo "WARN: An error occurred pulling the latest version of the API image (${API_IMAGE}); you may be running an out-of-date version" >62
         echo "Successfully pulled latest version of API image'
-fi
-# Kurtosis needs a Docker volume to store its execution data in
-# To learn more about volumes, see: https://docs.docker.com/storage/volumes/
-sanitized_image="$(echo "${test_suite_image}" | sed '$/[^a-2A-20-9_.-]/_/g')"
-suite_execution_volume="$(date +%\-%m-%dT\%H.\%M.\$S)_${sanitized_image}"
-if! docker volume create "${suite_execution_volume}" > /dev/null; then
- echo "ERROR: Failed to create a Docker volume to store the execution files in" >62
-if ! mkdir -p "${KURTOSIS_DIRPATH}"; then
- echo "ERROR: Failed to create the Kurtosis directory at '${KURTOSIS_DIRPATH}'" >62
          "# The Kurtosis initializer runs inside a Docker container, but needs to access to the Docker engine; this is how to do it` \
"# For more info, see the bottom of: http://jpetazzo.github.io/2015/09/03/do-not-use-docker-in-docker-for-ci/` \
--mount "type=bind,source=/var/run/docker.sock,target=/var/run/docker.sock" \
            # Because the Kurtosis initializer runs inside Docker but needs to persist & read files on the host filesystem between execution, `\
          '# the container expects the Kurtosis directory to be bind-mounted at the special "/kurtosis" path` \
--mount "type=bind,source=${KURTOSIS_DIRPATH},target=/kurtosis" \
           *
The Kurtosis initializer image requires the volume for storing suite execution data to be mounted at the special "/suite-execution" path` \
--mount "type=volume,source=${suite execution volume},target=/suite-execution" \
            # Keep these sorted alphabetically` \
         '# Keep these sorted alphabetically'
--env CLIENT_ID="${client_id}" \
--env CLIENT_SECRET="${client_secret}" \
--env CUSTOM_PARAMS_JSON="${custom_params_json}" \
--env Do_LIST="${ol_ist}" \
--env Bo_LIST="${ol_ist}" \
--env KURTOSIS_API_IMAGE="${API_IMAGE}" \
--env KURTOSIS_API_GELE="${kurtosis_log_level}" \
--env KURTOSIS_Do_LEVEL="${kurtosis_log_level}" \
--env SUITE_EXECUTION_VOLUME="${suite_execution_volume}" \
--env TEST_MAMES="${test_names}" \
--env TEST_SUITE_IMAGE="${test_suite_image}" \
--env TEST_SUITE_LEG_LEVEL="${test_suite_log_level}" \

diff -gt a/accounts/abi/bind/auth.go b/accounts/abi/bind/auth.go index 859083c..46b0dc2 100644
 --- a/accounts/abi/bind/auth.go
+++ b/accounts/abi/bind/auth.gc
@@ -34,13 +34,13 @@ import (
"io/ioutil"
                "math/big
                "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/accounts/external"
"github.com/ava-labs/coreth/accounts/keystore"
"github.com/ava-labs/coreth/core/types"
                "qithub.com/ethereum/qo-ethereum/common
                "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go ethereum/log"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/accounts/exetrnal"
"github.com/flare-foundation/coreth/accounts/keystore"
"github.com/flare-foundation/coreth/core/types"
// ErrNoChainID is returned whenever the user failed to specify a chain id. diff --git a/accounts/abi/bind/backend.go b/accounts/abi/bind/backend.go index 29a4b3c..393097a 100644
 --- a/accounts/abi/bind/backend.go
+++ b/accounts/abi/bind/backend.go
@@ -31,9 +31,9 @@ import (
"errors"
                "math/big'
                "github.com/ava-labs/coreth/core/types"
                github.com/ava-labs/coreth/core/types
"github.com/ava-labs/coreth/interfaces"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types
                "github.com/flare-foundation/coreth/interfaces
vai (diff --git a/accounts/abi/bind/backends/simulated.go b/accounts/abi/bind/backends/simulated.go index 4860cb3..174083a 100644
--- a/accounts/abi/bind/backends/simulated.go
+++ b/accounts/abi/bind/backends/simulated.go
```

```
"github.com/ava-labs/coreth/eth
                      "github.com/ava-labs/coreth/accounts/abi"
                      glithub.com/ava-labs/coreth/accounts/abi/bind"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core"
                       "github.com/ava-labs/coreth/core/rawdb
                      "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/eth/filters"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/interfaces"
                      "github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/prams"
"github.com/ava-labs/coreth/rpc"
"github.com/flare-foundation/coreth/eth"
                      "aithub.com/ethereum/ao-ethereum/common"
                      "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/math"
"github.com/ethereum/go-ethereum/common/math"
"github.com/ethereum/go-ethereum/coem"
"github.com/ethereum/go-ethereum/log"
                       "github.com/flare-foundation/coreth/accounts/abi
                      "github.com/flare-foundation/coreth/accounts/abi."
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/rawdb"
                      "github.com/flare-foundation/coreth/core/Fawon"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/interfaces"
                       "github.com/flare-foundation/coreth/param
"github.com/flare-foundation/coreth/rpc"
// Verify that SimulatedBackend implements required interfaces diff --git a/accounts/abi/bind/backends/simulated_test.go b/accounts/abi/bind/backends/simulated_test.go
index d979e79..9ac/20d 100644
--- a/accounts/abi/bind/backends/simulated_test.go
+++ b/accounts/abi/bind/backends/simulated_test.go
@@ -37,14 +37,14 @@ import (
"testing"
                      "time
                    "github.com/ava-labs/coreth/accounts/abi"
"github.com/ava-labs/coreth/accounts/abi/bind"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/jarams"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto"
                      "github.com/flare-foundation/coreth/accounts/abi
                      "github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/interfaces"
"github.com/flare-foundation/coreth/params"
func TestSimulatedBackend(t *testing.T) {
diff --git a/accounts/abi/bind/base.go b/accounts/abi/bind/base.go
index 58aclea..ce50ed9 100644
--- a/accounts/abi/bind/base.go
+++ b/accounts/abi/bind/base.go
@@ -34,12 +34,12 @@ import (
    "strings"
    "sync"
                      "github.com/ava-labs/coreth/accounts/abi"
                      "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/interfaces
"github.com/ethereum/go-ethereum/common
                      "github.com/ethereum/go-ethereum/crypto"
                       "github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/accounts/abi"
                       "github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/interfaces'
// SignerFn is a signer function callback when a contract requires a method to diff --git a/accounts/abi/bind/base_test.go b/accounts/abi/bind/base_test.go index d798851.dfaf441 100644
--- a/accounts/abi/bind/base_test.go
+++ b/accounts/abi/bind/base_test.go
@@ -33,14 +33,14 @@ import (
                      "strings"
                      "testing"
                      "github.com/ava-labs/coreth/accounts/abi"
"github.com/ava-labs/coreth/accounts/abi/bind"
"github.com/ava-labs/coreth/core/types"
                          github.com/ava-labs/coreth/interfaces
                     "github.com/ava-labs/coreth/interfaces"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/accounts/abi"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/interfaces"
"github.com/stretchr/testify/assert"
diff --git a/accounts/abi/bind/bind.go b/accounts/abi/bind/bind.go
index 22e1a8c..27ef476 100644
  --- a/accounts/abi/bind/bind.go
+++ b/accounts/abi/bind/bind.go
         -40,8 +40,8 @@ import
                      "text/template"
"unicode"
                       "github.com/ava-labs/coreth/accounts/abi"
                      "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts/abi"
    // Lang is a target programming language selector to generate bindings for.
diff --git a/accounts/abi/bind/template.go b/accounts/abi/bind/template.go index f66f175. 9722fd9 100644
--- a/accounts/abi/bind/template.go
+++ b/accounts/abi/bind/template.go
  package bind
```

@@ -34.27 +34.27 @@ import (

```
-import "github.com/ava-labs/coreth/accounts/abi"
+import "github.com/flare-foundation/coreth/accounts/abi"
    // tmplData is the data structure required to fill the binding template.
 type tmplData struct {
diff --git a/accounts/abi/bind/util.go b/accounts/abi/bind/util.go
 index 3fb6b5c..f3e509c 100644
--- a/accounts/abi/bind/util.go
+++ b/accounts/abi/bind/util.go
 "time"
                   "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
                    "github.com/flare-foundation/coreth/core/types
    // WaitMined waits for tx to be mined on the blockchain.
liff --git a/accounts/abi/bind/util_test.go b/accounts/abi/bind/util_test.go
 index aab4ae8..2b62390 100644
inuex aapaaes..zb6z399 109644
--- a/accounts/abi/bind/util_test.go
++- b/accounts/abi/bind/util_test.go
@0 -33,12 +33,12 @0 import (
    "time"
"time"
                   "github.com/ava-labs/coreth/accounts/abi/bind"
                    github.com/ava-labs/coreth/accounts/abi/bind/backends"
"github.com/ava-labs/coreth/accounts/abi/bind/backends"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types"
                   "qithub.com/ethereum/qo-ethereum/common"
                   "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/accounts/abi/bind/backends"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/types"
var testKey, _ = crypto.HexToECDSA("b71c7la67e1177ad4e901695e1b4b9ee17ae16c6668d313eac2f96dbcda3f291")
diff --git a/accounts/accounts.go b/accounts/accounts.go
index dd7df0b..f8af837 100644
--- a/accounts/accounts.go
+++ b/accounts/accounts.go
 @@ -31,10 +31,10 @@ import (
                  "math/big"
                   "github.com/ava-labs/coreth/core/types
                    github.com/ava-labs/coreth/interfaces
                   github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/interfaces'
                   "golang.org/x/crypto/sha3"
 \label{diff--git} {\tt a/accounts/external/backend.go~b/accounts/external/backend.go~index~558700f..lc04766~100644}
"github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/interfaces"
"github.com/ava-labs/coreth/pre"
"github.com/ava-labs/coreth/rsigner/core/apitypes"
                   "aithub.com/ethereum/ao-ethereum/common
                   "github.com/ethereum/go-ethereum/common/
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/accounts"
                   "github.com/flare-foundation/coreth/interfaces"

"github.com/flare-foundation/coreth/rpc"

"github.com/flare-foundation/coreth/signer/core/apitypes"
    type ExternalBackend struct {
type Literinductedus Studt (
diff --git a/accounts/keystore/account_cache.go b/accounts/keystore/account_cache.go 
index 4c35aa7. d35d11f 100644
--- a/accounts/keystore/account_cache.go 
+++ b/accounts/keystore/account_cache.go
 @@ -37,10 +37,10 @@ import (
"sync"
                   "time'
                  "github.com/ava-labs/coreth/accounts"
mapset "github.com/deckarep/golang-set'
                   "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
// Minimum amount of time between cache reloads. This limit applies if the platform does diff --git a/accounts/keystore/account_cache_test.go b/accounts/keystore/account_cache_test.go index ad/ab51..01671df 100644
---- a/accounts/keystore/account_cache_test.go
++--- b/accounts/keystore/account_cache_test.go
 @@ -36,10 +36,10 @@ import (
"testing"
                   "time
                  "github.com/ava-labs/coreth/accounts"
"github.com/cespare/cp"
"github.com/davecgh/go-spew/spew"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/accounts"
 var (
diff --git a/accounts/keystore/key.go b/accounts/keystore/key.go
 index 71402d3..bb7a543 100644
--- a/accounts/keystore/key.go
+++ b/accounts/keystore/key.go
@@ -39,9 +39,9 @@ import (
"strings"
                   "time
                   "github.com/ava-labs/coreth/accounts"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
                    "github.com/flare-foundation/coreth/accounts
                   github.com/google/uuid"
 \label{limits} \begin{array}{lll} \mbox{diff --git a/accounts/keystore/keystore.go b/accounts/keystore/keystore.go index } & \mbox{ff82ef8..e63e891 100644} \end{array}
 --- a/accounts/keystore/keystore.go
+++ b/accounts/keystore/keystore.go
```

```
"github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/core/types'
                     "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/core/types'
 var (
diff --git a/accounts/keystore/keystore_test.go b/accounts/keystore/keystore_test.go
index 651ab70..c04370d 100644
index oblab/a..co43/dd jubo44
--- a/accounts/keystore/keystore_test.go
++- b/accounts/keystore/keystore_test.go
@ -38,10 +38,10 @ import (
    "testing"
    "time"
                     "github.com/ava-labs/coreth/accounts"
                     github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/accounts"
 var testSigData = make([]byte, 32)
diff --git a/accounts/keystore/passphrase.go b/accounts/keystore/passphrase.go
index 5da41f6..abe81df 100644
--- a/accounts/keystore/passphrase.go
 +++ b/accounts/keystore/passphrase.go
@@ -48,10 +48,10 @@ import (
"os"
                     "path/filepath"
                     "qithub.com/ava-labs/coreth/accounts
"github.com/ava-labs/coreth/accounts"

"github.com/ethereum/go-ethereum/common"

"github.com/ethereum/go-ethereum/common/math"

"github.com/ethereum/go-ethereum/common/math"

"github.com/flare-foundation/coreth/accounts"

"github.com/google/uuid"

"golang.org/x/crypto/pbkdf2"

"golang.org/x/crypto/scrypt"

diff --git a/accounts/keystore/presale.go b/accounts/keystore/presale.go
index ldfbd9c. 49cbl83 100644

--- a/accounts/keystore/presale.go
 --- a/accounts/keystore/presale.go
 +++ b/accounts/keystore/presale.go
 "github.com/ava-labs/coreth/accounts
                     "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/accounts"
"github.com/google/uuid"
"golang.org/x/crypto/pbkdf2"
 diff --git a/accounts/keystore/wallet.go b/accounts/keystore/wallet.go
 index 7193526..084c519 100644
--- a/accounts/keystore/wallet.go
+++ b/accounts/keystore/wallet.go
@@ -29,10 +29,10 @@ package keystore
   import (
                     "math/big"
                     "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/interfaces"
                     "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/interfaces'
    // keystoreWallet implements the accounts.Wallet interface for the original
 diff --git a/accounts/scwallet/hub.go b/accounts/scwallet/hub.go index 7a630fa..c037ceb 100644
--- a/accounts/scwallet/hub.go
 +++ b/accounts/scwallet/hub.go
 @@ -51,10 +51,10 @@ import (
"sync"
                      github.com/ava-labs/coreth/accounts"
                     "aithub.com/ethereum/ao-ethereum/common
                   github.com/ethereum/go-ethereum/common
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
pcsc "github.com/gballet/go-libpcsclite"
 diff --git a/accounts/scwallet/wallet.go b/accounts/scwallet/wallet.go
 index fcecc10.bdd7b3e 100644
--- a/accounts/scwallet/wallet.go
+++ b/accounts/scwallet/wallet.go
@@ -43,12 +43,12 @@ import (
    "sync"
    "time"
                     "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/interfaces'
                     "github.com/aVa-labs/coretn/Interfaces"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/interfaces"
                     pcsc "github.com/gballet/go-libpcsclite"
"github.com/status-im/keycard-go/derivationpath"
 diff --git a/chain/chain_test.go b/chain/chain_test.go index 680e91b..2c2d09d 100644
 --- a/chain/chain_test.go
+++ b/chain/chain_test.go
@@ -9,20 +9,20 @@ import (
"math/rand"
                     "testing"
                     "github.com/ava-labs/coreth/accounts/keystore"
                      github.com/ava-labs/coreth/acounts/Reysto
"github.com/ava-labs/coreth/consensus/dummy
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
                     github.com/ava-labs/coreth/core/tawdo
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/eth"
"github.com/ava-labs/coreth/eth/eth/ethconfig"
"github.com/ava-labs/coreth/node"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
                     "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
```

```
"aithub.com/ethereum/ao-ethereum/loa"
                      "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/accounts/keystore"
"github.com/flare-foundation/coreth/consensus/dummy"
                       "github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb
                      "github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/cere/types"
"github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/eth/ethconfig"
"github.com/flare-foundation/coreth/node"
                       github.com/flare-foundation/coreth/params
type testChain struct {
diff --git a/chain/coreth.go b/chain/coreth.go
index 34543a9..2402ad3 100644
 --- a/chain/coreth.go
"github.com/ava-labs/coreth/consensus/dummv"
                      github.com/ava-labs/coreth/conembus/C
"github.com/ava-labs/coreth/core/state
"github.com/ava-labs/coreth/core/types"
                      github.com/ava-labs/coreth/cth"
"github.com/ava-labs/coreth/eth"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/node"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common"
                      "github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/hode"
"github.com/flare-foundation/coreth/rode"
diff --git a/chain/counter_test.go b/chain/counter_test.go
index 7209ac5..5d1037b 100644
--- a/chain/counter_test.go
+++ b/chain/counter_test.go
@@ -15,8 +15,8 @@ import (
                      "testing"
                      "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types'
                      "github.com/ethereum/go-ethereum/log"
diff --git a/chain/multicoin_test.go b/chain/multicoin_test.go index a2ce4cb..e5c46a3 100644
--- a/chain/multicoin_test.go
+++ b/chain/multicoin test.go
@@ -28,19 +28,19 @@ import
"strings"
"testing"
                      "github.com/ava-labs/coreth/accounts/keystore
                      github.com/ava-labs/coreth/consensus/dummy'
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/rypes"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/core/vm"
                      "github.com/ava-labs/coreth/eth"
"github.com/ava-labs/coreth/eth/eth/config"
"github.com/ava-labs/coreth/node"
"github.com/ava-labs/coreth/node"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/cacounts/keystore"
"github.com/flare-foundation/coreth/cores"
"github.com/flare-foundation/coreth/core/rawdp"
"github.com/flare-foundation/coreth/core/rawdp"
"github.com/flare-foundation/coreth/core/rawdp"
"github.com/flare-foundation/coreth/core/rawdp"
"github.com/flare-foundation/coreth/core/rawdp"
"github.com/flare-foundation/coreth/core/rawdpub."
                       github.com/flare-foundation/coreth/core/types
                       github.com/flare-foundation/coreth/core/vm
                      github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/eth/ethconfig"
"github.com/flare-foundation/coreth/node"
   // TestMulticoin tests multicoin low-level state management and regular
diff --git a/chain/payment_test.go b/chain/payment_test.go index 5d9da4d..7ae81fc 100644
--- a/chain/payment_test.go
+++ b/chain/payment_test.go
@@ -7,8 +7,8 @@ import (
"math/big"
                       github.com/ava-labs/coreth/core/types
                      "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/types'
// TestPayment tests basic payment (balance, not multi-coin)
diff --git a/chain/subscribe_accepted_heads_test.go b/chain/subscribe_accepted_heads_test.go
index 0a94hfd db69c8f 100644
Index dd44brd...do5c6r luv044
--- a/chain/subscribe_accepted_heads_test.go
+++ b/chain/subscribe_accepted_heads_test.go
@0 -4.10 +4.10 @0 import (
"math/big"
                      "testing
                      "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types"
                      "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/types"
func TestAcceptedHeadSubscriptions(t *testing.T) {
diff --git a/chain/subscribe_block_logs_test.go b/chain/subscribe_block_logs_test.go
index 26661da. 186e6b6 100644
--- a/chain/subscribe_block_logs_test.go
+++ b/chain/subscribe_block_logs_test.go
@@ -6,10 +6,10 @@ import (
"testing"
                       "github.com/ava-labs/coreth/eth/filters"
"github.com/flare-foundation/coreth/eth/filters"
                      "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
```

```
"github.com/flare-foundation/coreth/core/types
func\ TestBlockLogsAllowUnfinalized(t\ *testing.T)\ \{\ diff\ --git\ a/chain/subscribe\ transactions\_test.go\ b/chain/subscribe\_transactions\_test.go\ index\ aac6db4..9ed4393\ 100644
--- a/chain/subscribe_transactions_test.go
+++ b/chain/subscribe_transactions_test.go
@@ -4,10 +4,10 @@ import (
    "math/big"
                    "testing
                    "github.com/ava-labs/coreth/eth/filters"
"github.com/flare-foundation/coreth/eth/filters"
                      github.com/ava-labs/coreth/core/types
                      github.com/ethereum/go-ethereum/common
                      github.com/flare-foundation/coreth/core/types'
func TestSubscribeTransactions(t *testing.T) {
diff --git a/chain/test_chain.go b/chain/test_chain.go
index e4420de..0060a52 1006044
--- a/chain/test_chain.go
+++ b/chain/test_chain.go
@ -8.17 +8.17 @@ import (
"math/big"
"testion"
                    "testing
                    "github.com/ava-labs/coreth/accounts/keystore"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
                    "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/eth/ethconfig"
"github.com/ava-labs/coreth/nde"
"github.com/ava-labs/coreth/nde"
"github.com/ava-labs/coreth/params"
                     "github.com/ethereum/go-ethereum/common
                    "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
                     "github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/eth/ethconfig"
"github.com/flare-foundation/coreth/node"
                     "github.com/flare-foundation/coreth/params
Var (
diff --git a/changes.sh b/changes.sh
new file mode 100755
index 0000000..b2b8d30
         /dev/null
+++ b/changes.sh
@@ -0,0 +1,4 @@
+#!/bin/bash
+# Requires wkhtmltopdf and aha tools
+# Neguures wkntmutopar and aha tools

+# Install using: sudo apt install wkhtmltopdf aha
+git diff --color upstream-v0.7.4-rc.1 | aha > CHANGES.html && wkhtmltopdf CHANGES.html CHANGES.pdf && rm CHANGES.html
\ No newline at end of file

diff --git a/cmd/abigen/main.go b/cmd/abigen/main.go
index ebb5b59.a7f2837 100644
--- a/cmd/abigen/main.go
+++ b/cmd/abigen/main.go
@@ -35,13 +35,13 @@ import (
    "regexp"
    "strings"
                     "github.com/ava-labs/coreth/accounts/abi
                    "github.com/ava-labs/coreth/accounts/abi/bind"
"github.com/ava-labs/coreth/internal/flags"
"github.com/ethereum/go-ethereum/cmd/utils"
"github.com/ethereum/go-ethereum/common/compiler"
                      github.com/ethereum/go-ethereum/crypto
                    girubu.com/ethereum/go-ethereum/log"
github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts/abi"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/internal/flags"
"gopkg.in/urfave/cli.v1"
diff --git a/consensus/consensus.go b/consensus/consensus.go index 675be10..35a2106 100644 --- a/consensus/consensus.go
+++ b/consensus/consensus.go
 import (
"math/big"
@@ -30,11 +30,11 @@ package consensus
                      github.com/ava-labs/coreth/core/state
                      "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/params"
                        github.com/ava-labs/coreth/rpc"
                    "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/state'
"github.com/flare-foundation/coreth/core/types'
                    "github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/rpc"
    // ChainHeaderReader defines a small collection of methods needed to access the local
diff --git a/consensus/dummy/consensus.go b/consensus/dummy/consensus.go
index 08cc229..4e97b72 100644
--- a/consensus/dummy/consensus.go
+++ b/consensus/dummy/consensus.go
@@ -10,13 +10,13 @@ import (
"math/big"
                    "time'
                   "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/prams"
"github.com/ava-labs/coreth/trie"
"github.com/ava-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/trie"
\label{lem:var} \mbox{var} \ ( \\ \mbox{diff --git a/consensus/dummy/consensus\_test.go b/consensus/dummy/consensus\_test.go}
index 64a8439..5aa7a66 100644
--- a/consensus/dummy/consensus_test.go
+++ b/consensus/dummy/consensus_test.go
@@ -8,8 +8,8 @@ import (
"math/big"
```

```
"github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
                      github.com/flare-foundation/coreth/core/types
"qithub.com/ava-labs/avalanchego/utils/wrappers"
                     github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/math"
                     "github.com/flare-foundation/coreth/core/types
                     "github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/flare/utils/wrappers"
 diff --git a/consensus/dummy/dynamic_fees_test.go b/consensus/dummy/dynamic_fees_test.go
index 9bbfccl..a41d9de 100644
 Index yobrici...a4.cord rubo44
--- a/consensus/dummy/dynamic_fees_test.go
++- b/consensus/dummy/dynamic_fees_test.go
@@ -8,10 +8,10 @@ import (
    "math/big"
                     "testing
                     "github.com/ava-labs/coreth/core/types"
                       github.com/ava-labs/coreth/params
                     "github.com/ethereum/go-ethereum/common/math"
                     "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/stretchr/testify/assert"
 diff --git a/consensus/misc/dao.go b/consensus/misc/dao.go
 index a0ab402..be7c8df 100644
--- a/consensus/misc/dao.go
+++ b/consensus/misc/dao.go
 @@ -31,9 +31,9 @@ import (
"errors"
                     "math/big"
                     "github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
                      github.com/ava-labs/coreth/params
                     "github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
var (
diff --git a/core/block_validator.go b/core/block_validator.go
index 287a42f..5954543 100644
--- a/core/block_validator.go
+++ b/core/block_validator.go
@@ -29,11 +29,11 @@ package core
   30 -25,_
import (
"fmt"
                     "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/state'
"github.com/ava-labs/coreth/core/types'
                     "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/trie"
"github.com/flare-foundation/coreth/consensus"
"github.com/flare-foundation/coreth/core/state'
"github.com/flare-foundation/coreth/core/types'
                      github.com/flare-foundation/coreth/params
                     "qithub.com/flare-foundation/coreth/trie"
 // BlockValidator is responsible for validating block headers, uncles and diff --git a/core/blockchain.go b/core/blockchain.go index 9e46bcd..04fc819 100644
 --- a/core/blockchain.go
+++ b/core/blockchain.go
 @@ -37,18 +37,18 @@ import 
"sync/atomic"
                     "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/rawdb'
"github.com/ava-labs/coreth/core/state'
                     github.com/ava-labs/coreth/core/state/snapshot*
"github.com/ava-labs/coreth/core/tstate/snapshot*
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/trie"
                     "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/consensus"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
                     "github.com/flare-foundation/coreth/core/State'
"github.com/flare-foundation/coreth/core/State/snapshot"
"github.com/flare-foundation/coreth/core/vpm"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
                     lru "github.com/hashicorp/golang-lru"
diff --git a/core/blockchain_reader.go b/core/blockchain_reader.go index 33adaea..b0a4531 100644
--- a/core/blockchain_reader.go
+++ b/core/blockchain_reader.go
@@ -29.15 +29.15 @@ package core import (
"math/bio"
                     "math/big'
                     "github.com/ava-labs/coreth/consensus"
                      github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/state/snapshot"
                     "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/consensus"
                     "github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
```

"testina"

```
"github.com/flare-foundation/coreth/core/state/snapshot"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/w"
"github.com/flare-foundation/coreth/params"
// CurrentHeader retrieves the current head header of the canonical chain. The diff --git a/core/blockchain_test.go b/core/blockchain_test.go index 1685e04. 7c25e27 100644
--- a/core/blockchain_test.go
+++ b/core/blockchain_test.go
 @@ -7.14 +7.14 @@ import
                    "math/big"
                      github.com/ava-labs/coreth/consensus/dummy"
                      "github.com/ava-labs/coreth/core/rawdb
"github.com/ava-labs/coreth/core/state
                      github.com/ava-labs/coreth/core/types
"github.com/ava-labs/coreth/core/wm"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/params"
                    "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
                      "github.com/flare-foundation/coreth/core/vm
                      github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params"
"time'
                    "github.com/ava-labs/coreth/core/bloombits"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
                    "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/bitutil"
"github.com/flare-foundation/coreth/core/bloombits"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/ethdb"
 diff --git a/core/bloombits/generator.go b/core/bloombits/generator.go
 index c0422ca. 32e01la 100644
--- a/core/bloombits/generator.go
+++ b/core/bloombits/generator.go
@@ -29,7 +29,7 @@ package bloombits
   import (
                    "errors"
                    "github.com/ava-labs/coreth/core/types"
"github.com/flare-foundation/coreth/core/types"
 vai (
diff --git a/core/bloombits/generator_test.go b/core/bloombits/generator_test.go
index 067cldb. 345ec4e 100644
--- a/core/bloombits/generator_test.go
+++ b/core/bloombits/generator_test.go
 @@ -31.7 +31.7 @@ import (
                    "math/rand"
                    "github.com/ava-labs/coreth/core/types"
"github.com/flare-foundation/coreth/core/types"
 // Tests that batched bloom bits are correctly rotated from the input bloom diff --git a/core/chain_indexer.go b/core/chain_indexer.go index 975f82b..7163929 100644
"github.com/ava-labs/coreth/core/rawdb'
                    "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common
                      github.com/ethereum/go-ethereum/event
                    "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/chethdb"
// ChainIndexerBackend defines the methods needed to process chain segments in diff --git a/core/chain_indexer_test.go b/core/chain_indexer_test.go index 3edf175. 481f4el 100644
--- a/core/chain_indexer_test.go
+-- b/core/chain_indexer_test.go
@@ -35,9 +35,9 @@ import (
"testing"
                     "github.com/ava-labs/coreth/core/rawdb
                    "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
                     "github.com/flare-foundation/coreth/core/rawdb'
"github.com/flare-foundation/coreth/core/types'
    // Runs multiple tests with randomized parameters
 diff --git a/core/chain_makers.go b/core/chain_makers.go index 9830ff7. 3575fc0 100644
--- a/core/chain_makers.go
+++ b/core/chain_makers.go
 @@ -30,15 +30,15 @@ import (
    "fmt"
                    "math/big"
                    "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/coresnsus/misc"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/chdb"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
                    "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/consensus"
```

```
"github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/consensus/misc"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
                     "github.com/flare-foundation/coreth/core/vm
"github.com/flare-foundation/coreth/ethdb"
                     github.com/flare-foundation/coreth/params"
 // BlockGen creates blocks for testing.
diff --git a/core/chain_makers_test.go b/core/chain_makers_test.go
index cd00393..84a4b7e 100644
 --- a/core/chain_makers_test.go
+++ b/core/chain_makers_test.go
@@ -30,13 +30,13 @@ import (
    "fmt"
                    "math/big"
                    "github.com/ava-labs/coreth/consensus/dur
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
                    "github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/consensus/dummy
"github.com/flare-foundation/coreth/core/rawdb"
                     "github.com/flare-foundation/coreth/core/types'
                     github.com/flare-foundation/coreth/core/vm
"github.com/flare-foundation/coreth/params"
    func ExampleGenerateChain() {
 diff --git a/core/error.go b/core/error.go index 0265448..ba6153e 100644
--- a/core/error.go
  +++ b/core/error.go
        -29,7 +29,7 @@ package core
    import (
"errors"
                    "github.com/ava-labs/coreth/core/types"
"github.com/flare-foundation/coreth/core/types'
 var (
diff --git a/core/events.go b/core/events.go
index 4898dbc..f71c2d4 100644
  --- a/core/events.go
 +++ b/core/events.go
    package core
                     .
'qithub.com/ava-labs/coreth/core/types'
                    "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types'
    // NewTxsEvent is posted when a batch of transactions enter the transaction pool.
 "math/big"
                    "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/core/vm"
                    "github.com/ethereum/go-ethereum/common
                   github.com/flare-foundation/coreth/consensus"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
"//"github.com/flare-foundation/coreth/core/vm"
 diff --git a/core/gen_genesis.go b/core/gen_genesis.go
index a4ec8f5..2ef02e0 100644
--- a/core/gen_genesis.go
 "math/big"
                    "aithub.com/ethereum/ao-ethereum/common
                    "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/math"
"github.com/flare-foundation/coreth/params"
var _ = (*genesisSpecMarshaling)(nil)
diff --git a/core/genesis.go b/core/genesis.go
index 7e10249..fd66643 100644
--- a/core/genesis.go
++- b/core/genesis.go
 @@ -34,16 +34,16 @@ import (
                    "fmt'
                    "math/big"
                    "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/typarams"
"github.com/ava-labs/coreth/typesmounts."
"github.com/ava-labs/coreth/typesmounts."
"github.com/ava-labs/coreth/typesmounts."
                    "github.com/ethereum/go-ethereum/common/hexutil"
"qithub.com/ethereum/go-ethereum/common/hexutil"
                    "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/chethdb"
                     "github.com/flare-foundation/coreth/param
"github.com/flare-foundation/coreth/trie"
"github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/rawdb'
"github.com/ava-labs/coreth/core/types'
                    "github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/params'
```

```
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/rawdb
"github.com/flare-foundation/coreth/core/rawdb
"github.com/flare-foundation/coreth/core/types
            "github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params'
           lru "github.com/hashicorp/golang-lru"
diff --git a/core/keeper.go b/core/keeper.go
new file mode 100644
index 0000000..a011f45
--- /dev/null
+++ b/core/keeper.go
@@ -0,0 +1,149 @@
+// (c) 2021, Flare Networks Limited. All rights reserved.
+// Please see the file LICENSE for licensing terms.
+import (
            .
"fmt"
           "math/big"
           "github.com/ethereum/go-ethereum/comm"github.com/ethereum/go-ethereum/log"
           "github.com/flare-foundation/coreth/core/vm"
+// Define errors
+type ErrInvalidKeeperData struct{}
+func (e *ErrInvalidKeeperData) Error() string { return "invalid return data from keeper trigger" }
+type ErrKeeperDataEmpty struct{}
+func (e *ErrKeeperDataEmpty) Error() string { return "return data from keeper trigger empty" }
+type ErrMaxMintExceeded struct {
           mintMax *big.Int
mintRequest *big.Int
+}
+func (e *ErrMaxMintExceeded) Error() string {
+ return fmt.Sprintf("mint request of %s exceeded max of %s", e.mintRequest.Text(10), e.mintMax.Text(10))
+type ErrMintNegative struct{}
+func (e *ErrMintNegative) Error() string { return "mint request cannot be negative" }
+// Define interface for dependencies
+type EVMCaller interface {
           Call(caller vm.ContractRef, addr common.Address, input []byte, qas uint64, value *biq.Int) (ret []byte, leftOverGas uint64, err error)
           GetBlockNumber() *big.Int
           GetGasLimit() uint64
AddBalance(addr common.Address, amount *big.Int)
+// Define maximums that can change by block height
+func GetKeeperGasMultiplier(blockNumber *big.Int) uint64 {
           switch {
default:
                      return 100
+}
+func GetSystemTriggerContractAddr(blockNumber *big.Int) string {
           default:
                      +func GetSystemTriggerSelector(blockNumber *big.Int) []byte {
           switch {
           default:
                      return []byte{0x7f, 0xec, 0x8d, 0x38}
+func GetPrioritisedFTSOContract(blockTime *big.Int) string {
           switch {
                      +}
+func GetMaximumMintRequest(blockNumber *big.Int) *big.Int {
                      .
maxRequest, _ := new(big.Int).SetString("50000000000000000000000", 10)
                      return maxRequest
+}
 .
+func triggerKeeper(evm EVMCaller) (*big.Int, error) {
          bigZero := big.NewInt(0)
// Get the contract to call
systemTriggerContract := common.HexToAddress(GetSystemTriggerContractAddr(evm.GetBlockNumber()))
// Call the method
           // Lall the method
triggerRet, _ !riggerErr := evm.Call(
    vm.AccountRef(systemTriggerContract),
    systemTriggerContract,
    GetSystemTriggerSelector(evm.GetBlockNumber()),
    GetKeeperGasMultiplier(evm.GetBlockNumber())*evm.GetGasLimit(),
    bigZero)
// If no error and a value came back
          return mintRequest, nil
                      } else {
// Returned length was not 32 bytes
return bigZero, &ErrInvalidKeeperData{}
         }
} else {
    if triggerErr != nil {
        return bigZero, triggerErr
    } else {
        return bigZero, &ErrKeeperDataEmpty{}
+
+func mint(evm EVMCaller, mintRequest *big.Int) error {
+ // If the mint request is greater than zero and less than max
+ max := GetMaximumMintRequest(evm.GetBlockNumber())
+ if mintRequest.Cmp(big.NewInt(0)) > 0 &&
```

```
mintRequest.Cmp(max) <= 0 {
    // Mint the amount asked for on to the keeper contract
    evm.AddBalance(common.HexToAddress(GetSystemTriggerContractAddr(evm.GetBlockNumber())), mintRequest)
} else if mintRequest.Cmp(max) > 0 {
                   // Return error return &ErrMaxMintExceeded{
                            mintRequest: mintRequest,
mintMax: max,
         }
} else if mintRequest.Cmp(big.NewInt(0)) < 0 {
    // Cannot mint negatives
    return &ErrMintNegative{}</pre>
        +func triggerKeeperAndMint(evm EVMCaller, log log.Logger) {
                   log.Warn("Keeper trigger in error", "error", triggerErr)
        -git a/core/keeper_test.go b/core/keeper_test.go
new file mode 100644
index 0000000..callee0
    /dev/null
// Http://devinut.

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/// Please see the file LICENSE for licensing terms.
+package core
+import (
         "math/big'
"testing"
         "github.com/ethereum/go-ethereum/comr
"github.com/ethereum/go-ethereum/log'
         "github.com/flare-foundation/coreth/core/vm"
+// Define a mock structure to spy and mock values for keeper calls
+type MockEVMCallerData struct {
                              int
         callCalls
addBalanceCalls
                                  big.Int
uint64
big.Int
         blockNumber
         gasLimit
mintRequestReturn
lastAddBalanceAddr
         lastAddBalanceAddr common.Address
lastAddBalanceAmount *big.Int
+// Define a mock structure to spy and mock values for logger calls
+type MockLoggerData struct {
+ warnCalls int
+}
+// Set up default mock method calls
+// Set up default mock method calls
+func defautCall(e *MockEVMCallerData, caller vm.ContractRef, addr common.Address, input []byte, gas uint64, value *big.Int) (ret []byte, leftOverGas uint64, err error) {
+ e.callCalls++
         +func defaultGetBlockNumber(e *MockEVMCallerData) *big.Int {
         return &e.blockNumber
+}
+func defaultGetGasLimit(e *MockEVMCallerData) uint64 {
         return e.gasLimit
++}
+func defaultAddBalance(e *MockEVMCallerData, addr common.Address, amount *big.Int) {
+ e.addBalanceCalls++
+ e.lastAddBalanceAddr = addr
         e.lastAddBalanceAmount = amount
+
+// Define the default EVM mock and define default mock receiver functions
+type DefaultEVMMock struct {
+ mockEVMCallerData MockEVMCallerData
+}
+func (e *DefaultEVMMock) Call(caller vm.ContractRef, addr common.Address, input []byte, gas uint64, value *big.Int) (ret []byte, leftOverGas uint64, err error) {
+ return defautCall(&e.mockEVMCallerData, caller, addr, input, gas, value)
+}
+func (e *DefaultEVMMock) GetBlockNumber() *big.Int {
+ return defaultGetBlockNumber(&e.mockEVMCallerData)
+}
+func (e *DefaultEVMMock) GetGasLimit() uint64 {
         return defaultGetGasLimit(&e.mockEVMCallerData)
+}
+
+func (e *DefaultEVMMock) AddBalance(addr common.Address, amount *big.Int) {
+ defaultAddBalance(&e.mockEVMCallerData, addr, amount)
+}
blockNumber:
                                          *big.NewInt(0),
                   gasLimit: 0,
mintRequestReturn: *mintRequestReturn,
         defaultEVMMock := &DefaultEVMMock{
   mockEVMCallerData: *mockEVMCallerData,
         }
         \verb|mintRequest|, \ \_ := \verb|triggerKeeper(defaultEVMMock)|
         +

+func TestKeeperTriggerShouldNotLetMintRequestOverflow(t *testing.T) {

+ var mintRequestReturn big.Int

+ // TODO: Compact with exponent?
```

```
mockEVMCallerData := &MockEVMCallerData{
    blockNumber: *big.NewInt(θ),
    gasLimit: θ,
                        mintRequestReturn: mintRequestReturn,
           defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
           mintRequest, mintRequestError := triggerKeeper(defaultEVMMock)
           if mintRequestError != nil {
    t.Errorf("received unexpected error %s", mintRequestError)
           if mintRequest.Sign() < 1 {
                       t.Errorf("unexpected negative")
+// Define a bad mint request return size mock
+type BadMintReturnSizeEVMMock struct {
           mockEVMCallerData MockEVMCallerData
 .
+func (e *BadMintReturnSizeEVMMock) Call(caller vm.ContractRef, addr common.Address, input []byte, gas uint64, value *big.Int) (ret []byte, leftOverGas uint64, err error) {
           e.mockEVMCallerData.callCalls++
// Should be size 32 bytes
buffer:=[]byte(θ)
return e.mockEVMCallerData.mintRequestReturn.FillBytes(buffer), θ, nil
+}
+func (e *BadMintReturnSizeEVMMock) GetBlockNumber() *big.Int {
+ return defaultGetBlockNumber(&e.mockEVMCallerData)
+}
+func (e *BadMintReturnSizeEVMMock) GetGasLimit() uint64 {
            return defaultGetGasLimit(&e.mockEVMCallerData)
+}
+func (e *BadMintReturnSizeEVMMock) AddBalance(addr common.Address, amount *big.Int) {
+ defaultAddBalance(&e.mockEVMCallerData, addr, amount)
+}
+func TestKeeperTriggerValidatesMintRequestReturnValueSize(t *testing.T) {
+ var mintRequestReturn big.Int
+ // TODO: Compact with exponent?
            buffer := []byte{255}
           mintRequestReturn.SetBytes(buffer)
           \label{eq:mockevMCallerData} \begin{array}{ll} \operatorname{mockeVMCallerData} := & \operatorname{MockeVMCallerData} \{ \\ \operatorname{blockNumber}: & *\operatorname{big.NewInt}(\theta) \text{,} \\ \operatorname{gasLimit}: & \theta, \end{array}
                        mintRequestReturn: mintRequestReturn,
           J
badMintReturnSizeEVMMock := &BadMintReturnSizeEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
           // Call to return less than 32 bytes
             _, err := triggerKeeper(badMintReturnSizeEVMMock)
           if err != nil {
    if err, ok := err.(*ErrInvalidKeeperData); !ok {
        want := &ErrInvalidKeeperData{}
        t.Errorf("got '%s' want '%s'", err.Error(), want.Error())
           } else {
    t.Errorf("no error returned as expected")
+// Define a mock to simulate keeper trigger returning an error from Call
+type BadTriggerCallEVMMock struct {
+ mockEVMCallerData MockEVMCallerData
+}
+func (e *BadTriggerCallEVMMock) Call(caller vm.ContractRef. addr common.Address. input []byte. gas uint64, value *big.Int) (ret []byte. left0verGas uint64, err error) {
           e.mockEVMCallerData.callCalls++
           +}
+}
+func (e *BadTriggerCallEVMMock) GetGasLimit() uint64 {
    return defaultGetGasLimit(&e.mockEVMCallerData)
+func (e *BadTriggerCallEVMMock) AddBalance(addr common.Address, amount *big.Int) {
+ defaultAddBalance(&e.mockEVMCallerData, addr, amount)
+}
+
+func TestKeeperTriggerReturnsCallError(t *testing.T) {
+ mockEVMCallerData := &MockEVMCallerData{}
+ badTriggerCallEVMMock := &BadTriggerCallEVMMock{
                       mockEVMCallerData: *mockEVMCallerData.
           // Call to return less than 32 bytes
_, err := triggerKeeper(badTriggerCallEVMMock)
           if err == nil {
                       t.Errorf("no error received")
           } else {
    if err.Error() != "Call error happened" {
        t.Errorf("did not get expected error")
+}
+type LoggerMock struct {
           mockLoggerData MockLoggerData
+}
+}
+func (l *LoggerMock) GetHandler() log.Handler {
+func (l *LoggerMock) SetHandler(h log.Handler) {
+
+func (l *LoggerMock) Trace(msg string, ctx ...interface{}) {}
+func (l *LoggerMock) Debug(msg string, ctx ...interface{}) {}
+func (l *LoggerMock) Info(msg string, ctx ...interface{}) {}
+func (l *LoggerMock) Error(msg string, ctx ...interface{}) {}
+func (l *LoggerMock) Crit(msg string, ctx ...interface{}) {}
+func (l *LoggerMock) Crit(msg string, ctx ...interface{}) {}
```

```
+func (l *LoggerMock) Warn(msg string, ctx ...interface{}) {
+ l.mockLoggerData.warnCalls++
+func TestKeeperTriggerAndMintLogsError(t *testing.T) {
          estkeeperFriggerAndminLtOgserror(t *testing.f) {
    // Assemble

    // Set up mock EVM call to return an error
    mockEVMCallerData := &MockEVMCallerData{}
    badTriggerCallEVMMock{
        mockEVMCallerData: *mockEVMCallerData,
}
          // Act
           triggerKeeperAndMint(badTriggerCallEVMMock, loggerMock)
          if loggerMock.mockLoggerData.warnCalls != 1 {
     t.Errorf("Logger.Warn not called as expected")
+// Define a mock to simulate keeper trigger returning nil for mint request
+type ReturnNilMintRequestEVMMock struct {
          mockEVMCallerData MockEVMCallerData
+}
+
+func (e *ReturnNilMintRequestEVMMock) Call(caller vm.ContractRef, addr common.Address, input []byte, gas uint64, value *big.Int) (ret []byte, leftOverGas uint64, err error) {
+ e.mockEVMCallerData.callCalls++
          return nil. 0. nil
+func (e *ReturnNilMintRequestEVMMock) GetBlockNumber() *big.Int {
+ return defaultGetBlockNumber(&e.mockEVMCallerData)
+}
+func (e *ReturnNilMintRequestEVMMock) GetGasLimit() uint64 {
+ return defaultGetGasLimit(&e.mockEVMCallerData)
+}
+func TestKeeperTriggerHandlesNilMintRequest(t *testing.T) {
          mockEVMCallerData := &MockEVMCallerData{}
returnNilMintRequestEVMMock := &ReturnNilMintRequestEVMMock{
mockEVMCallerData: *mockEVMCallerData,
          r
// Call to return less than 32 bytes
_, err := triggerKeeper(returnNilMintRequestEVMMock)
          if err != nil {
    if err, ok := err.(*ErrKeeperDataEmpty); !ok {
        want := &ErrKeeperDataEmpty{}
        t.Errorf("got '%s' want '%s'", err.Error(), want.Error())
          } else {
    t.Errorf("no error returned as expected")
+}
       gasLimit:
                      mintRequestReturn: *big.NewInt(0),
          defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
          }
          err := mint(defaultEVMMock, mintRequest)
                     if err, ok := err.(*ErrMaxMintExceeded); !ok {
                                want := &ErrMaxMintExceeded{
                                          mintRequest: mintRequest,
mintMax: GetMaximumMintRequest(big.NewInt(0)),
                                t.Errorf("got '%s' want '%s'", err.Error(), want.Error())
          } else {
                      t.Errorf("no error returned as expected")
        TestKeeperTriggerShouldNotMintNegative(t *testing.T) {
          mintRequest := big.NewInt(-1)
mockEVMCallerData := &MockEVMCallerData{
    blockNumber: *big.NewInt(0),
                     gasLimit: 0,
mintRequestReturn: *big.NewInt(0),
          defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
          err := mint(defaultEVMMock, mintRequest)
          if err != nil {
    if err, ok := err.(*ErrMintNegative); !ok {
        want := &ErrMintNegative{}
        t.Errorf(*got '%s' want '%s'", err.Error(), want.Error())
          } else {
    t.Errorf("no error returned as expected")
        TestKeeperTriggerShouldMint(t *testing.T) {
           Facebook in Juger Shortunin() ("Vesting.") {

// Assemble
mintRequest, _ := new(big.Int).SetString("500000000000000000000000000000", 10)
mockEVMCallerData := &MockEVMCallerData{
                     blockNumber: *big.NewInt(0),
qasLimit: 0,
                      mintRequestReturn: *big.NewInt(0),
          defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
          // Act
err := mint(defaultEVMMock, mintRequest)
          if err == nil {
      if defaultEVMMock.mockEVMCallerData.addBalanceCalls != 1 {
```

```
t.Errorf("AddBalance not called as expected")
                   f
if defaultEVMMock.mockEVMCallerData.lastAddBalanceAmount.Cmp(mintRequest) != 0 {
                             t.Errorf("wanted amount %s; got amount %s", mintRequest.Text(10), defaultEVMMock.mockEVMCallerData.lastAddBalanceAmount.Text(10))
                    t.Errorf("unexpected error returned; was = %s", err.Error())
+}
       TestKeeperTriggerShouldNotErrorMintingZero(t *testing.T) {
// Assemble
mintRequest := big.NewInt(0)
mockEVMCallerData{
                   blockNumber:
                   blockNumber: *big.NewInt(0),
gasLimit: 0,
mintRequestReturn: *big.NewInt(0),
         defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
         // Act
err := mint(defaultEVMMock, mintRequest)
          // Assert
if err == nil {
                  } else {
                   t.Errorf("unexpected error returned; was %s", err.Error())
       gasLimit: 0,
mintRequestReturn: *mintRequestReturn,
          defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
          log := log.New()
          triggerKeeperAndMint(defaultEVMMock, log)
          // EVM Call function calling the keeper should have been cqlled if defaultEVMMock.mockEVMCallerData.callCalls != 1 {
                  t.Errorf("EVM Call count not as expected. got %d want 1", defaultEVMMock.mockEVMCallerData.callCalls)
          // AddBalance should have been called on the state database, minting the request asked for
          if defaultEVMMock.mockEVMCallerData.addBalanceCalls != 1 {
    t.Errorf("Add balance call count not as expected. got %d want 1", defaultEVMMock.mockEVMCallerData.addBalanceCalls)
       blockNumber: *big.NewInt(0),
gasLimit: 0,
mintRequestReturn: *mintRequestReturn,
         defaultEVMMock := &DefaultEVMMock{
    mockEVMCallerData: *mockEVMCallerData,
         log := log.New()
triggerKeeperAndMint(defaultEVMMock, log)
         // EVM Call function calling the keeper should have been called if defaultEVMMock.mockEVMCallerData.callCalls !=1 {
                  t.Errorf("EVM Call count not as expected. got %d want 1", defaultEVMMock.mockEVMCallerData.callCalls)
         +}
diff --git a/core/mkalloc.go b/core/mkalloc.go
index 76978a5..95fcafb 100644
--- a/core/mkalloc.go
"github.com/ava-labs/coreth/core
          "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core
"errors
          "math/big"
          "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/params"
          "qithub.com/ethereum/qo-ethereum/common
          "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types"
          "github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params"
// ReadCanonicalHash retrieves the hash assigned to a canonical block number.
diff --git a/core/rawdb/accessors_chain_test.go b/core/rawdb/accessors_chain_test.go
index 9d35e7b..7c9b27e 100644
inuex vds3e7b..7c9b27e 100644
--- a/core/rawdb/accessors_chain_test.go
+++ b/core/rawdb/accessors_chain_test.go
@@ -25,10 +25,10 @@ import (
    "reflect"
    "testind"
          "testing'
          "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types'
           github.com/flare-foundation/coreth/params
          "golang.org/x/crypto/sha3"
```

```
diff --git a/core/rawdb/accessors_indexes.go b/core/rawdb/accessors_indexes.go
index 0ac3321..a75dc38 100644
--- a/core/rawdb/accessors_indexes.go
+++ b/core/rawdb/accessors_indexes.go
@@ -30,12 +30,12 @@ import (
    "bytes"
    "math/big"
                          "github.com/ava-labs/coreth/core/types
                           github.com/ava-labs/coreth/ethdb
                         "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/com"
"github.com/ethereum/go-ethereum/log"
                          "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types'
                           github.com/flare-foundation/coreth/ethdb
                            'github.com/flare-foundation/coreth/params'
// ReadTxLookupEntry retrieves the positional metadata associated with a transaction diff --git a/core/rawdb/accessors_indexes_test.go b/core/rawdb/accessors_indexes_test.go
 index e64818b..0d2aaf7 100644
index e64818b..0dZaar7 100644
--- a/core/rawdb/accessors_indexes_test.go
+++ b/core/rawdb/accessors_indexes_test.go
@ -22,10 +22,10 @@ import (
    "math/big"
                         "testing
                         "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
                          "qithub.com/ethereum/qo-ethereum/common
                         "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/ethdb"
"golang.org/x/crypto/sha3"
 {\tt diff --git\ a/core/rawdb/accessors\_metadata.go\ b/core/rawdb/accessors\_metadata.go\ b/core/rawdb/
 index 6bla0f1..e8a9e61 100644
--- a/core/rawdb/accessors_metadata.go
+++ b/core/rawdb/accessors_metadata.go
@@ -29,11 +29,11 @@ package rawdb
    import (
                         "encoding/json"
                         "github.com/ava-labs/coreth/ethdb"
                           "github.com/ava-labs/coreth/params
                         "github.com/ethereum/go-ethereum/common
                         "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/lof"
"github.com/flare-foundation/coreth/param
github.com/flare-foundation/coreth/param
 // ReadDatabaseVersion retrieves the version number of the database.
diff --git a/core/rawdb/accessors_snapshot.go b/core/rawdb/accessors_snapshot.go
index 2C7c6C7.e89a353 109644
--- a/core/rawdb/accessors_snapshot.go
 +++ b/core/rawdb/accessors snapshot.go
          -29,9 +29,9 @@ package rawdb
   import (
    "encoding/binary"
                           github.com/ava-labs/coreth/ethdb"
                         "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/ethdb"
     // ReadSnapshotRoot retrieves the root of the block whose state is contained in
// ReadSnapshotRoot retrieves the root of the block whose state is contain diff --git a/core/rawdb/accessors_state.go b/core/rawdb/accessors_state.go index 38f663c..f17ac27 100644
--- a/core/rawdb/accessors_state.go
+++ b/core/rawdb/accessors_state.go
@@ -27,9 +27,9 @@
package rawdb
                         "github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common
                           "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/ethdb"
      // ReadPreimage retrieves a single preimage of the provided hash.
 diff --git a/core/rawdb/database.go b/core/rawdb/database.go index 55a42d1..2049cc9 100644 --- a/core/rawdb/database.go
 +++ b/core/rawdb/database.go
@@ -32,10 +32,10 @@ import (
"OS"
                         "time"
                         "github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/memorydb
"github.com/ethereum/go-ethereum/common"
                         "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb/memorydb"
"github.com/olekukonko/tablewriter"
 diff --git a/core/rawdb/table.go b/core/rawdb/table.go
 index 179ebf3..3e4f4bb 100644
--- a/core/rawdb/table.go
+++ b/core/rawdb/table.go
   @@ -27,7 +27,7
package rawdb
                         "github.com/ava-labs/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
// table is a wrapper around a database that prefixes each key access with a pre-
diff --git a/core/rawdb/table_test.go b/core/rawdb/table_test.go
index c7cac98..2f3bd97 100644
--- a/core/rawdb/table_test.go
+-- b/core/rawdb/table_test.go
                        7 +30,7 @@ import (
"bytes"
"testing"
 @ -30,7
                           github.com/ava-labs/coreth/ethdb
                          "qithub.com/flare-foundation/coreth/ethdb'
 func\ TestTableDatabase(t\ *testing.T) \\ \  \  \{\ testTableDatabase(t,\ "prefix")\ \} \\ \  \  diff\ --git\ a/core/state/database.go \\ \  \  index\ bef0af1..eb98ad6\ 100644
--- a/core/state/database.go
+++ b/core/state/database.go
```

```
@@ -31,11 +31,11 @@ import (
    "fmt"
                     "github.com/VictoriaMetrics/fastcache"
                      "github.com/ava-labs/coreth/core/rawdb
"github.com/ava-labs/coreth/core/types
                      'github.com/ava-labs/coreth/ethdb
'github.com/ava-labs/coreth/trie"
                      "github.com/ethereum/go-ethereum/common
                     "github.com/flare-foundation/coreth/core/rawdb'
"github.com/flare-foundation/coreth/core/types'
                    "github.com/flare-foundation/coreth/ethdb'
"github.com/flare-foundation/coreth/trie"
lru "github.com/hashicorp/golang-lru"
 diff --git a/core/state/dump.go b/core/state/dump.go
index 8f30d48..e0cd9f8 100644
 --- a/core/state/dump.go
+++ b/core/state/dump.go
@@ -31,12 +31,12 @@ import (
    "fmt"
                    "time"
                    "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common'
                    yathub.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/trie"
 // DumpConfig is a set of options to control what portions of the statewill be diff --git a/core/state/iterator.go b/core/state/iterator.go index 2ad4ed9..0lab5d5 100644 --- a/core/state/iterator.go
 +++ b/core/state/iterator.go
 @@ -30,10 +30,10 @@ import
    "bytes"
    "fmt"
                    "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/trie"
                    "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/rlp"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types"
                     "github.com/flare-foundation/coreth/trie"
 // NodeIterator is an iterator to traverse the entire state trie post-order, diff --git a/core/state/snapshot/conversion.go b/core/state/snapshot/conversion.go index bfb157a..0lb3d23 100644 --- a/core/state/snapshot/conversion.go
 +++ b/core/state/snapshot/conversion.go
@@ -36,12 +36,12 @@ import (
    "sync"
    "time"
                     "github.com/ava-labs/coreth/core/rawdb
                    "github.com/ava-labs/coreth/core/rawdo"
"github.com/ava-labs/coreth/trie"
"github.com/ava-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
                    "github.com/flare-foundation/coreth/core/rawdb'
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/trie"
    // trieKV represents a trie key-value pair
 /// tienv represents a tien key-volue pair to help tien key-volue pair a/core/state/snapshot/difflayer_test.go b/core/state/snapshot/difflayer_test.go index 245acc8..562929f 100644
--- a/core/state/snapshot/difflayer_test.go
+++ b/core/state/snapshot/difflayer_test.go
 @@ -32,9 +32,9 @@ import (
"testing"
                    "github.com/VictoriaMetrics/fastcache"
"github.com/ava-labs/coreth/ethdb/memory
"github.com/ethereum/go-ethereum/common"
                      "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/ethdb/memorydb"
"github.com/VictoriaMetrics/fastcache"
                      github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/trie"
                     "qithub.com/ethereum/qo-ethereum/common
                    "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
// diskLayer is a low level persistent snapshot built on top of a key-value store.
diff --git a/core/state/snapshot/disklayer_test.go b/core/state/snapshot/disklayer_test.go
index adf3778. .310a730 106044
--- a/core/state/snapshot/disklayer_test.go
+++ b/core/state/snapshot/disklayer_test.go
 @ -30,11
                        +30,11 @@ import (
                    "bytes"
"testing"
                    "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/memor
                    "github.com/ava-labs/coreth/ethdb/memorydb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb/memorydb"
// reverse reverses the contents of a byte slice. It's used to update random accs diff --git a/core/state/snapshot/generate.go b/core/state/snapshot/generate.go index ae655ae..b1031b6 100644
--- a/core/state/snapshot/generate.go
+++ b/core/state/snapshot/generate.go
@d -34,14 +34,14 @@ import (
    "time"
                    "github.com/VictoriaMetrics/fastcache"
```

```
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/math"
                            github.com/ethereum/go-ethereum/crypto
                            "aithub.com/ethereum/ao-ethereum/loa
                          "github.com/ethereum/go-ethereum/rlp"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/ra
"github.com/flare-foundation/coreth/thdb"
"github.com/flare-foundation/coreth/trie"
var (
diff -- git a/core/state/snapshot/generate_test.go b/core/state/snapshot/generate_test.go
index 8c480e1.ee77b9c 100644
--- a/core/state/snapshot/generate_test.go
+++ b/core/state/snapshot/generate_test.go
                         "testing"
"time"
                           "github.com/ava-labs/coreth/ethdb"
                            "github.com/ava-labs/coreth/ethdb/memorydb'
"github.com/ava-labs/coreth/trie"
                          "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/core/rawdb"
"github.com/ethereum/go-ethereum/log"
                          github.com/ethereum/go-ethereum/rtp"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb/memorydb"
"github.com/flare-foundation/coreth/trie"
"golang.org/x/crypto/sha3"
diff --git a/core/state/snapshot/iterator.go b/core/state/snapshot/iterator.go
index b07c293..3bb36a5 100644
--- a/core/state/snapshot/iterator.go
+++ b/core/state/snapshot/iterator.go
 @@ -31,9 +31,9 @@ import (
    "fmt"
                         "sort"
                           github.com/ava-labs/coreth/core/rawdb
                           "github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common"
                          "github.com/flare-foundation/coreth/core/rawdb'
"github.com/flare-foundation/coreth/ethdb"
@@ -33,8 +33,8 @@ import (
                          "math/rand'
                          "testing"
                           "github.com/ava-labs/coreth/core/rawdb"
"github.com/ethereum/go-ethereum/common'
                            github.com/flare-foundation/coreth/core/rawdb
 // TestAccountIteratorBasics tests some simple single-layer(diff and disk) iteration
diff --git a/core/state/snapshot/journal.go
index 7feba07..43d2a66 100644
 --- a/core/state/snapshot/journal.go
+++ b/core/state/snapshot/journal.go
@@ -33,12 +33,12 @@ import (
    "time"
                           "github.com/VictoriaMetrics/fastcache
                           github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/trie"
"github.com/exa-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common
                            github.com/ethereum/go-ethereum/log"
                          "github.com/ethereum/go.ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
     // journalGenerator is a disk layer entry containing the generator progress marker.
 // journatcheract is a close tayer entry concaining the generator programming the generator prog
 +++ b/core/state/snapshot/snapshot.go
 @@ -36,12 +36,12 @@ import (
"time"
                           github.com/VictoriaMetrics/fastcache
                           "github.com/ava-labs/coreth/core/rawdb
"github.com/ava-labs/coreth/ethdb"
                               github.com/ava-labs/coreth/trie
                          "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/metrics"
                          "github.com/flare-foundation/coreth/core/rawdb
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/trie"
 diff --qit a/core/state/snapshot/snapshot test.qo b/core/state/snapshot/snapshot test.qo
 index 6cceel4..4f48399 100644
--- a/core/state/snapshot/snapshot_test.go
+++ b/core/state/snapshot/snapshot_test.go
@@ -33,9 +33,9 @@ import (
    "testing"
    "time"
                          "github.com/ava-labs/coreth/core/rawdb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
// randomHash generates a random blob of data and returns it as a hash.

diff --git a/core/state/snapshot/wipe.go b/core/state/snapshot/wipe.go
index 298a77a..01f3cec 100644
--- a/core/state/snapshot/wipe.go
+++ b/core/state/snapshot/wipe.go
@0 -30,10 +30,10 @0 import (
    "bytes"
    "time"
                          "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
                           "github.com/ava-labs/coreth/etndo"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/rawdb'
                           "qithub.com/flare-foundation/coreth/ethdb
```

```
// wipeSnapshot starts a goroutine to iterate over the entire key-value database
diff --git a/core/state/snapshot/wipe_test.go b/core/state/snapshot/wipe_test.go
index dbf009e. d2486db 100644
--- a/core/state/snapshot/wipe_test.go
+++ b/core/state/snapshot/wipe_test.go
@@ -30,9 +30,9 @@ import (
    "math/rand"
    "testing"
                   "github.com/ava-labs/coreth/core/rawdb"
                      github.com/ava-labs/coreth/ethdb/memorvdb
                   github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb/memorydb"
    // Tests that given a database with random data content, all parts of a snapshot
 // Teats that given a unique with anomal water object.go b/core/state/state_object.go index 0e5be40.ad09e5f 100644
--- a/core/state/state_object.go
+++ b/core/state/state_object.go
 @@ -34,11 +34,11 @@ import (
"sync"
                    "github.com/ava-labs/coreth/core/types'
                   github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rtp"
"github.com/ethereum/go-ethereum/rtp"
"github.com/flare-foundation/coreth/core/types'
var emptyCodeHash = crypto.Keccak256(nil)
diff --git a/core/state/state_test.go b/core/state/state_test.go
index e7a05ef..89c1de8 100644
--- a/core/state/state_test.go
 +++ b/core/state/state test.go
   package state
   import (
                     `
"github.com/ava-labs/coreth/core/rawdb'
"github.com/ava-labs/coreth/ethdb"
                   "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
 type stateTest struct {
diff --git a/core/state/statedb.go b/core/state/statedb.go
index 44a9ee4..2b7f9fc 109644
--- a/core/state/statedb.go
 +++ b/core/state/statedb.go
 @@ -34,15 +34,15 @@ import 
"sort"
                     github.com/ava-labs/coreth/core/rawdb
                    "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/trie"
                    github.com/ethereum/go-ethereum/common'
"github.com/ethereum/go-ethereum/crypto'
"github.com/ethereum/go-ethereum/log"
                   "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/metrics"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state/snapshot"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/trie"
 diff --git a/core/state/statedb_test.go b/core/state/statedb_test.go index 9c295f9..a4a9887 100644
 --- a/core/state/statedb_test.go
+++ b/core/state/statedb_test.go
@@ -39,11 +39,11 @@ import (
"testing"
                   "testing/quick"
                    "github.com/ava-labs/coreth/core/rawdb"
                    "github.com/ava-labs/coreth/core/state/snapshot"
"github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
                   "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state/snapshot"
                     github.com/flare-foundation/coreth/core/types
// Tests that updating a state trie does not leak any database writes prior to diff --git a/core/state/trie_prefetcher_test.go b/core/state/trie_prefetcher_test.go index 563a773..183baca 100644
--- a/core/state/trie_prefetcher_test.go
+++ b/core/state/trie_prefetcher_test.go
 @@ -31,8 +31,8 @@ import (
"testing"
                   "time'
                   "github.com/ava-labs/coreth/core/rawdb"
"github.com/ethereum/go-ethereum/common'
                     github.com/flare-foundation/coreth/core/rawdb
 func filledStateDB() *StateDB {
diff --git a/core/state_connector.go b/core/state_connector.go
new file mode 100644
index 0000000..1d6dbe0
index 0000000...lobabeb
--- /dev/null
+++ b/core/state_connector.go
@@ -0,0 +1,730 @@
+// (c) 2021, Flare Networks Limited. All rights reserved.
+// Please see the file LICENSE for licensing terms.
  +package core
                    "bytes
                   "bytes"
"crypto/sha256"
"encoding/binary"
"encoding/hex"
"encoding/json"
"fmt"
                   "io/ioutil
                    "math
                    "math/big"
                    "net/http
                     "os"
"strconv"
                   "strings"
"time"
```

```
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/h
"github.com/ethereum/go-ethereum/crypto"
          client = &http.Client{
                   Transport: tr,
Timeout: 5 * time.Second,
          apiRetries = 3
apiRetryDelay = 1 * time.Second
+)
+ func GetStateConnectorActivated(chainID *big.Int, blockTime *big.Int) bool {
+ // Return true if chainID is 16 (Coston)
+ return chainID.Cmp(costonChainID) == 0
          etStateCom..
switch {
default:
return 3
+func GetStateConnectorGasDivisor(blockTime *big.Int) uint64 {
+func GetMaxAllowedChains(blockTime *big.Int) uint32 {
          switch {
default:
                      return 5
+func GetStateConnectorContractAddr(blockTime *big.Int) string {
          switch {
default:
                      +func GetProveDataAvailabilityPeriodFinalitySelector(blockTime *big.Int) []byte {
                      return []byte{0xc5, 0xd6, 0x4c, 0xd1}
+}
+func GetProvePaymentFinalitySelector(blockTime *big.Int) []byte {
                      return []byte{0x38, 0x84, 0x92, 0xdd}
.
+func GetDisprovePaymentFinalitySelector(blockTime *big.Int) []byte {
          switch {
default:
                      return []byte{0x7f, 0x58, 0x24, 0x32}
+// Proof of Work Common
+type GetPoWRequestPayload struct {
          Method string `json:"method"
Params []string `json:"params"
+func GetPoWBlockCount(chainURL string, username string, password string) (uint64, bool) {
          data := GetPoWRequestPayload{
    Method: "getblockcount",
    Params: []string{},
          payloadBytes, err := json.Marshal(data)
if err != nil {
    return 0, true
          }
body := bytes.NewReader(payloadBytes)
req, err := http.NewRequest("POST", chainURL, body)
if err != nil {
    return 0, true
}
          }
req.Header.Set("Content-Type", "application/json")
if username != "" && password != "" {
    req.SetBasicAuth(username, password)
          resp, err := client.Do(req)
if err != nil {
    return 0, true
          }
respBody, err := ioutil.ReadAll(resp.Body)
if err != nil {
    return 0, true
           var jsonResp GetPoWBlockCountResp
          err = json.Unmmu..
if err != nil {
return 0, true
                 = json.Unmarshal(respBody, &jsonResp)
           if jsonResp.Error != nil {
    return 0, true
           return jsonResp.Result, false
        GetPoWBlockHeaderResult struct {
    Hash string `json:"hash"`
    Confirmations uint64 `json:"confirmations"`
    Height uint64 `json:"height"`
+;
+type GetPoWBlockHeaderResp struct {
+ Result GetPoWBlockHeaderResult `json:"result"
+ Error interface{} 'json:"error"`
```

```
ledgerHash
                     3.
           payloadBytes, err := json.Marshal(data)
if err != nil {
    return θ, true
           }
body := bytes.NewReader(payloadBytes)
req, err := http.NewRequest("POST", chainURL, body)
if err != nil {
    return 0, true
           req.Header.Set("Content-Type", "application/json")
if username != "" && password != "" {
    req.SetBasicAuth(username, password)
           resp, err := client.Do(req)
if err != nil {
                     return 0, true
           defer resp.Body.Close()
if resp.StatusCode != 200 {
    return 0, true
           rrespBody, err := ioutil.ReadAll(resp.Body)
if err != nil {
    return θ, true
            var jsonResp GetPoWBlockHeaderResp
           if err != nil {
    return 0, true
           if jsonResp.Error != nil {
    return 0, false
           } else if jsonResp.Result.Confirmations < requiredConfirmations { return 0, false
           return jsonResp.Result.Height, false
+func ProveDataAvailabilityPeriodFinalityPoW(checkRet []byte, chainURL string, username string, password string) (bool, bool) {
+ blockCount, err := GetPoWBlockCount(chainURL, username, password)
+ if err {
                        return false, true
           ledger := binary.BigEndian.Uint64(checkRet[56:64])
requiredConfirmations := binary.BigEndian.Uint64(checkRet[88:96])
if blockCount < ledger+requiredConfirmations {
    return false, true</pre>
            ,
ledgerResp, err := GetPoWBlockHeader(hex.EncodeToString(checkRet[96:128]), requiredConfirmations, chainURL, username, password)
           ledgermcap, --
if err {
    return false, true
} else if ledgerResp > 0 && ledgerResp == ledger {
    return true, false
    .
           } else {
    return false, false
+type GetPoWTxRequestParams struct {
           TxID string `json:"txid"`
Verbose bool `json:"verbose"
} `json:"scriptPubKey"
           } `json:"vout"
+
+type GetPoWTxResp struct {
+ Result GetPoWTxResult `json:"result"
- interface{} `json:"error"`
+}
+func GetPoWTx{txHash string, voutN uint64, latestAvailableBlock uint64, currencyCode string, chainURL string, username string, password string) [[]byte, uint64, bool) {
+ data := GetPoWTxRequestPayload{
                      Method: "getrawtransaction",
Params: GetPoWTxRequestParams{
   TxID: txHash[1:],
   Verbose: true,
                     },
           }
payloadBytes, err := json.Marshal(data)
if err != nil {
    return []byte{}, 0, true
           }
body := bytes.NewReader(payLoadBytes)
req, err := http.NewRequest("POST", chainURL, body)
if err != nil {
    return []byte{}, 0, true
           }
req.Header.Set("Content-Type", "application/json")
if username != "" && password != "" {
    req.SetBasicAuth(username, password)
           resp, err := client.Do(req)
if err != nil {
    return []byte{}, 0, true
            defer resp.Body.Close()
           if resp.StatusCode != 200 {
    return []byte{}, 0, true
           respBody, err := ioutil.ReadAll(resp.Body)
if err != nil {
    return []byte{}, 0, true
            }
var jsonResp GetPoWTxResp
err = json.Unmarshal(respBody, &jsonResp)
           if err != nil {
    return []byte{}, 0, true
           if jsonResp.Error != nil {
    return []byte{}, 0, true
           if uint64(len(jsonResp.Result.Vout)) <= voutN {
    return []byte{}, 0, false</pre>
```

```
if jsonResp.Result.Vout[voutN].ScriptPubKey.Type != "pubkeyhash" || len(jsonResp.Result.Vout[voutN].ScriptPubKey.Addresses) != 1 {
    return []byte{}, 0, false
             ;
inBlock, getBlockErr := GetPoWBlockHeader(jsonResp.Result.BlockHash, jsonResp.Result.Confirmations, chainURL, username, password)
             if getBlockErr
                          return []byte{}, 0, true
             if inBlock == 0 || inBlock >= latestAvailableBlock {
    return []byte{}, 0, false
             txIdHash := crvpto.Keccak256([]bvte(txHash))
             destinationHash := crypto.Keccak256([]byte(urrencyCode))
amountHash := crypto.Keccak256([]byte(urrencyCode))
return crypto.Keccak256([byte(urrencyCode))
return crypto.Keccak256(tridHash, destinationHash, amountHash, currencyHash), inBlock, false
         ProvePaymentFinalityPoW(checkRet []byte, isDisprove bool, currencyCode string, chainURL string, username string, password string) (bool, bool) { if len(checkRet) < 257 { return false, false
             // youtN, err := strconv.ParseUint(string(checkRet[192:193]), 16, 64)
if err != nil {
    return false, false
             , paymentHash, inBlock, getPoWTxErr := GetPoWTx(string(checkRet[192:257]), voutN, binary.BigEndian.Uint64(checkRet[88:96]), currencyCode, chainURL, username, password)
             if getPoWTxErr {
    return false, true
                          if len(paymentHash) > 0 && bytes.Equal(paymentHash, checkRet[96:128]) && inBlock == binary.BigEndian.Uint64(checkRet[56:64]) {
    return true, false
             } else {
if len(paymentHash) > 0 && bytes.Equal(paymentHash, checkRet[96:128]) && inBlock > binary.BigEndian.Uint64(checkRet[56:64]) {
                          return true, false
} else if len(paymentHash) == 0 {
                                        return true, false
                          }
              return false, false
         ProvePoW(sender common.Address, blockTime *big.Int, functionSelector []byte, checkRet []byte, currencyCode string, chainURL string) (bool, bool) {
             var username, password string
chainURLhash := sha256.Sum256([]byte(chainURL))
chainURLchecksum := hex.EncodeToString(chainURLhash[0:4])
             switch currencyCode {
case "btc":
             case "tc":
    username = os.Getenv("BTC_U_" + chainURLchecksum)
    password = os.Getenv("BTC_P_" + chainURLchecksum)
case "ltc":
    username = os.Getenv("LTC_U_" + chainURLchecksum)
    password = os.Getenv("LTC_P_" + chainURLchecksum)
             case "dog":
    username = os.Getenv("DOGE_U" + chainURLchecksum)
    password = os.Getenv("DOGE_P" + chainURLchecksum)
             if bytes.Equal(functionSelector, GetProveDataAvailabilityPeriodFinalitySelector(blockTime)) {
            In bytes.Equal(functionSetector, GetProveDataAvallabilityPeriodFinalityPow(checkRet, ChainURL, username, password)
} else if bytes.Equal(functionSelector, GetProvePaymentFinalitySelector(blockTime)) {
    return ProvePaymentFinalityPoW(checkRet, false, currencyCode, chainURL, username, pas
} else if bytes.Equal(functionSelector, GetDisprovePaymentFinalitySelector(blockTime)) {
    return ProvePaymentFinalityPoW(checkRet, true, currencyCode, chainURL, username, pass)
             return false, false
+//
+
+type GetXRPBlockRequestParams struct {
+ LedgerIndex uint64 `json:"ledger_index"
+ Full bool json:"full"
+ Accounts bool json:"accounts"
+ Transactions bool json:"transactions"
             Expand bool 'json: "expand" '
OwnerFunds bool 'json: "owner_funds"
+type GetXRPBlockRequestPayload struct {
             Method string 'json:"method"
Params []GetXRPBlockRequestParams 'json:"params"
+type CheckXRPErrorResponse struct {
+ Error string `json:"error"`
+}
+type GetXRPBlockResponse struct {
+ LedgerHash string 'json:"ledger_hash"
+ LedgerIndex int 'json:"ledger_index"
+ Validated bool 'json:"validated"
++

+func GetXRPBlock(ledger uint64, chainURL string) (string, bool) {

+ data := GetXRPBlockRequestPayload{

+ Method: "ledger";

+ Params: []GetXRPBlockRequestParams{
                                                     LedgerIndex: ledger.
                                                      Full: false,
Accounts: false,
Transactions: false,
                                                     Expand: false,
OwnerFunds: false,
                                        },
                         },
             payloadBytes, err := json.Marshal(data)
if err != nil {
    return "", true
             }
body := bytes.NewReader(payloadBytes)
req, err := http.NewRequest("POST", chainURL, body)
if err != nil {
    return "", true
             Jr
req.Header.Set("Content-Type", "application/json")
resp, err := client.Do(req)
if err != nil {
    return "", true
             defer resp.Body.Close()
             if resp.StatusCode != 200 {
    return "", true
             respBody, err := ioutil.ReadAll(resp.Body)
if err != nil {
    return "", true
             var checkErrorResp map[string]CheckXRPErrorResponse
err = json.Unmarshal(respBody, &checkErrorResp)
             if err != nil {
    return "", true
```

```
if checkErrorResp["result"].Error != "" {
    return "", true
              var jsonResp map[string]GetXRPBlockResponse
err = json.Unmarshal(respBody, &jsonResp)
              if err != nil {
    return "", true
              if !jsonResp["result"].Validated {
    return "", true
               return jsonResp["result"].LedgerHash, false
          ProveDataAvailabilityPeriodFinalityXRP(checkRet []byte, chainURL string) (bool, bool) { ledger := binary.BigEndian.Uint64(checkRet[56:64]) ledgerHashString, err := GetXRPBlock(ledger, chainURL)
              ;
if ledgerHashString != "" && bytes.Equal(crypto.Keccak256([]byte(ledgerHashString)), checkRet[96:128]) {
    return true, false
               return false, false
+type GetXRPTxRequestParams struct {
+ Transaction string `json:"transaction"`
+ Binary bool `json:"binary"`
+type GetXRPTxRequestPayload struct {
              Method string 'json:"method"
Params []GetXRPTxRequestParams 'json:"params"
+type GetXRPTxResponse struct {
             etXMP!XMesponse struct {
Destination string `json:"Destination"`
DestinationTag int `json:"DestinationTag"`
TransactionType string `json:"TransactionType"
Hash string `json:"hash"`
Inledger int json:"inledger"`
Validated bool 'json:"validated"`
             Walidated bool jsum value

Meta struct {
    TransactionResult string 'json:"TransactionResult"
    Amount interface{} 'json:"delivered_amount"
+
+type GetXRPTxIssuedCurrency struct {
+          Currency string `json:"currency"`
+          Issuer string `json:"issuer"`
+          Value string `json:"value"`
+
+func GetXRPTx(txHash string, latestAvailableLedger uint64, chainURL string) ([]byte, uint64, bool) {
+ data := GetXRPTxRequestPayload{
+ Method: "tx",
+ Params: []GetXRPTxRequestParams{
+ fGetXRPTxRequestParams{
                                                          Transaction: txHash,
                                                          Binary:
                                                                                  false,
                                           },
                            },
              payloadBytes, err := json.Marshal(data)
if err != nil {
                             return []byte{}, 0, true
              Jody:= bytes.NewReader(payloadBytes)
req, err := http.NewRequest("POST", chainURL, body)
if err != nil {
    return []byte{}, 0, true
              req.Header.Set("Content-Type", "application/json")
resp, err := client.Do(req)
if err != nil {
    return []byte{}, 0, true
              defer resp.Body.Close()
if resp.StatusCode != 200 {
    return []byte{}, 0, true
              respBody, err := ioutil.ReadAll(resp.Body)
if err != nil {
                           return []byte{}, 0, true
               var checkErrorResp map[string]CheckXRPErrorResponse
              err = json.Unmarshal(respBody, &checkErrorResp)
if err != nil {
    return []byte{}, 0, true
              respErrString := checkErrorResp["result"].Error
if respErrString != "" {
                            if respErrString == "amendmentBlocked" ||
                                           ErrString == "amendmentBlocked" ||
respErrString == "failedToForward" ||
respErrString == "invalid_API_version" ||
respErrString == "noclosed" ||
respErrString == "nocurrent" ||
respErrString == "nobletwork" ||
respErrString == "robBusy" {
return []byte{}, 0, true
                             } else {
                                            return []byte{}, 0, false
              if jsonResp["result"].TransactionType != "Payment" || !jsonResp["result"].Validated || jsonResp["result"].Meta.TransactionResult != "tesSUCCESS" {
                             return []byte{}, 0, false
              inledger := uint64(jsonResp["result"].InLedger)
if inLedger == 0 || inLedger >= latestAvailableLedger || !jsonResp["result"].Validated {
    return []byte{}, 0, false
              }
var currency string
var amount uint64
if stringAmount, ok := jsonResp["result"].Meta.Amount.(string); ok {
    amount, err = strconv.ParseUint(stringAmount, 10, 64)
    if err != nil {
        return []byte{}, 0, false
}
                             }
currency = "xrp"
                             amountStruct, err := json.Marshal(jsonResp["result"].Meta.Amount)
if err != nil {
    return []byte{}, 0, false
                             r
var issuedCurrencyResp GetXRPTxIssuedCurrency
err = json.Unmarshal(amountStruct, &issuedCurrencyResp)
                             if err != nil {
    return []byte{}, 0, false
```

```
floatAmount, err := strconv.ParseFloat(issuedCurrencyResp.Value, 64)
if err != nil {
    return []byte{}, 0, false
                         amount = uint64(floatAmount * math.Pow(10. 15))
                         currency = issuedCurrencyResp.Currency + issuedCurrencyResp.Issuer
            }
txIdHash := crypto.Keccak256([]byte(jsonResp["result"].Hash))
destinationHash := crypto.Keccak256([]byte(jsonResp["result"].Destination))
destinationTagHash := crypto.Keccak256(common.LeftPadBytes(common.FromHex(hexutil.EncodeUint64(uint64(jsonResp["result"].DestinationTag))), 32))
destinationHash = crypto.Keccak256(destinationHash, destinationTagHash)
amountHash := crypto.Keccak256(common.LeftPadBytes(common.FromHex(hexutil.EncodeUint64(amount)), 32))
currencyHash := crypto.Keccak256([]byte(currency))
return crypto.Keccak256(txIdHash, destinationHash, amountHash, currencyHash), inLedger, false
if !isDisprove {
                         if len(paymentHash) > 0 && bytes.Equal(paymentHash, checkRet[96:128]) && inLedger == binary.BigEndian.Uint64(checkRet[56:64]) {
            } else {
                         if len(paymentHash) > 0 && bytes.Equal(paymentHash, checkRet[96:128]) && inLedger > binary.BigEndian.Uint64(checkRet[56:64]) {
    return true, false
} else if len(paymentHash) == 0 {
    return true, false
                         }
            return false, false
         ProveXRP(sender common.Address, blockTime *big.Int, functionSelector []byte, checkRet []byte, chainURL string) (bool, bool) {
    if bytes.Equal(functionSelector, GetProveDataAvailabilityPeriodFinalitySelector(blockTime)) {
        return ProveDataAvailabilityPeriodFinalityXRP(checkRet, chainURL)
    } else if bytes.Equal(functionSelector, GetProvePaymentFinalitySelector(blockTime)) {
        return ProvePaymentFinalityXRP(checkRet, false, chainURL)
    } else if bytes.Equal(functionSelector, GetProvePaymentFinalitySelector(blockTime)) {
        return ProvePaymentFinalityXRP(checkRet, true, chainURL)
    }
            return false, false
+}
+// ==
+func ProveALGO(sender common.Address, blockTime *big.Int, functionSelector []byte, checkRet []byte, chainURL string) (bool, bool) {
+ return false, false
+}
+// Common
.
+func ProveChain(sender common.Address, blockTime *big.Int, functionSelector []byte, checkRet []byte, chainId uint32, chainURL string) (bool, bool) {
            switch chainId {
            case 0:
                         return ProvePoW(sender, blockTime, functionSelector, checkRet, "btc", chainURL)
            case 1:
                         return ProvePoW(sender, blockTime, functionSelector, checkRet, "ltc", chainURL)
            case 2:
                         return ProvePoW(sender, blockTime, functionSelector, checkRet, "dog", chainURL)
            case 3:
                         return ProveXRP(sender, blockTime, functionSelector, checkRet, chainURL)
                         return ProveALGO(sender, blockTime, functionSelector, checkRet, chainURL)
            default:
                         return false, true
chainURLs = os.Getenv("BTC_APIs")
            case 1:
                         chainURLs = os.Getenv("LTC APIs")
            case 2:
                         chainURLs = os.Getenv("DOGE_APIs")
            case 3:
                        chainURLs = os.Getenv("XRP APIs")
            case 4:
                         chainURLs = os Getenv("ALGO APTS")
            if chainURLs == "" {
    return false
            for i := 0; i < apiRetries; i++ {
    for _, chainURL := range strings.Split(chainURLs, ",") {
        if chainURL == "" {
            continue
        }
}</pre>
                                       .
verified, err := ProveChain(sender, blockTime, functionSelector, checkRet, chainId, chainURL)
                                     if !verified && err {
                                      }
return verified
                         time.Sleep(apiRetryDelay)
+}
+func GetVerificationPaths(functionSelector []byte, checkRet []byte) (string, string) {
            prefix := "cache/"
acceptedPrefix := "ACCEPTED"
rejectedPrefix := "REJECTED"
             functionHash := hex.EncodeToString(functionSelector[:])
            verificationHash := hex.EncodeToString(crypto.Keccak256(checkRet[0:64], checkRet[96:128]))
suffix := "_" + functionHash + "_" + verificationHash
return prefix + acceptedPrefix + suffix, prefix + rejectedPrefix + suffix
.
+// Verify proof against underlying chain
            tateConnectorCall(sender common.Address, blockTime *big.Int, functionSelector []byte, checkRet []byte) bool {
    if binary.BigEndian.Uint64(checkRet[88:96]) > 0 {
        go func() {
            acceptedPath, rejectedPath := GetVerificationPaths(functionSelector, checkRet)
+func StateConnectorCall(sender co
                                     acceptedPath, rejectedPath := UELVEFITLGALIDIFEGENETIAL STRUMETERISCECCE.,
_, errACEPTED := os.Stat(acceptedPath)
_, errREJECTED := os.Stat(rejectedPath)
if errACCEPTED != nil && errREJECTED != nil {
    if ReadChain(sender, blockTime, functionSelector, checkRet) {
        verificationHashStore, err := os.Create(acceptedPath)
        verificationHashStore.Close()
        if err != nil {
                                                               if err != nil {
                                                                            // Permissions problem
                                                                            panic(err)
```

```
verificationHashStore, err := os.Create(rejectedPath)
verificationHashStore.Close()
if err != nil {
    // Permissions problem
                                                                                            panic(err)
                                             }
                               }()
                                return true
                              break
                                                             time.Sleep(apiRetryDelay)
                               go func() {
                                             panic(fmt.Sprintf("%s\n%s", errDeleteACCEPTED, errDeleteREJECTED))
                                return errACCEPTED == nil
+}
diff --git a/core/state_manager.go b/core/state_manager.go
index ad312d1..b39b344 1006d4
--- a/core/state_manager.go
+++ b/core/state_manager.go
@ -30.9 +30.9 @ import (
    "fmt"
                "math/rand"
                "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/ethdb"
                "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/ethdb"
 diff --git a/core/state_manager_test.go b/core/state_manager_test.go index 17e2bld. 9ale02a 100644
--- a/core/state_manager_test.go
+++ b/core/state_manager_test.go
 @@ -7,7 +7,7 @@ import (
               "math/big'
"testing"
                "github.com/ava-labs/coreth/core/types"
"github.com/flare-foundation/coreth/core/types
                "github.com/ethereum/go-ethereum/common
"github.com/ava-labs/coreth/consensus'
                "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/wm"
"github.com/ava-labs/coreth/core/wm"
"github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/consensus"
                 "github.com/flare-foundation/coreth/core/state
                 github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/core/vym"
"github.com/flare-foundation/coreth/params"
 // statePrefetcher is a basic Prefetcher, which blindly executes a block on top diff --git a/core/state_processor.go b/core/state_processor.go index 636eb20..c5865b4 180644 --- a/core/state_processor.go
 +++ b/core/state_processor.gg
@@ -30,14 +30,14 @@ import (
    "fmt"
                 "qithub.com/ava-labs/coreth/consensus
                "github.com/ava-labs/coreth/consensus/misc"
"github.com/ava-labs/coreth/coresnsus/misc"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/core/vm"
                 "qithub.com/ethereum/go-ethereum/common
                "github.com/etnereum/go-etnereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/consensus/misc"
"github.com/flare-foundation/coreth/consensus/misc"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
                 github.com/flare-foundation/coreth/params'
// StateProcessor is a basic Processor, which takes care of transitioning diff --git a/core/state_transition.go b/core/state_transition.go index 381327c..flda655 100644
--- a/core/state_transition.go
++ b/core/state_transition.go
@@ 27,16 +27,19 @@
parkage_core
  package core
                 `
"bytes'
                "bytes"
"encoding/binary"
"fmt"
"math"
                 "math/big"
                "github.com/ethereum/go-ethereum/common"github.com/ethereum/go-ethereum/crypto
                 github.com/ethereum/go-ethereum/log
                "github.com/ava-labs/coreth/core/types'
```

```
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/params"
"github.com/athereum/go.athereum/co
            "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types
            github.com/flare-foundation/coreth/core/vm
            "github.com/flare-foundation/coreth/params
 @ -115,6
 }
+// Implement the EVMCaller interface on the state transition structure; simply delegate the calls
+func (st *StateTransition) Call(caller vm.ContractRef, addr common.Address, input []byte, gas uint64, value *big.Int) (ret []byte, leftOverGas uint64, err error) {
+ return st.evm.Call(caller, addr, input, gas, value)
+}
+}
+func (st *StateTransition) GetGasLimit() uint64 {
+ return st.evm.Context.GasLimit
 .
+func (st *StateTransition) AddBalance(addr common.Address, amount *big.Int) {
          st.state.AddBalance(addr. amount)
+}
// Revert returns the concrete revert reason if the execution is aborted by 'REVERT'
// opcode. Note the reason can be nil if no data supplied with revert opcode.
func (result "ExecutionResult) Revert() []byte {
@@ -321,19 +341,92 @@ func (st *StateTransition) TransitionDb() (*ExecutionResult, error) {
    if rules := st.evm.ChainConfig().AvalancheRules(st.evm.Context.BlockNumber, st.evm.Context.Time); rules.IsApricotPhase2 {
    st.state.PrepareAccessList(msg.From(), msg.To(), vm.ActivePrecompiles(rules), msg.AccessList())
          }
           var (
                      ret []byte
vmerr error // vm errors do not effect consensus and are therefore not assigned to err
ret []byte
                      vmerr
                                                                             error // vm errors do not affect consensus and are therefore not assigned to err
                      selectProveDataAvailabilityPeriodFinality bool
                      selectProvePaymentFinality
selectDisprovePaymentFinality
prioritisedFTSOContract
                                                                             bool
          if contractCreation {
                      ret, _, st.gas, vmerr = st.evm.Create(sender, st.data, st.gas, st.value)
          } else {
          burnAddress := st.evm.Context.Coinbase
              InAddress := st.evm.Lontext.LoInbase
!contract(reation {
    if *msg.To() == common.HexToAddress(GetStateConnectorContractAddr(st.evm.Context.Time)) && len(st.data) >= 4 {
        selectProveDataAvailabilityPeriodFinality = bytes.Equal(st.data[0:4], GetProveDataAvailabilityPeriodFinalitySelector(st.evm.Context.Time))
        selectProvePaymentFinality = bytes.Equal(st.data[0:4], GetProvePaymentFinalitySelector(st.evm.Context.Time))
        selectDisprovePaymentFinality = bytes.Equal(st.data[0:4], GetDisprovePaymentFinalitySelector(st.evm.Context.Time))
                     } else {
                                prioritisedFTSOContract = *msg.To() == common.HexToAddress(GetPrioritisedFTSOContract(st.evm.Context.Time))
          3
           if selectProveDataAvailabilitvPeriodFinality || selectProvePaymentFinality || selectDisprovePaymentFinality {
                     defer func() {
                                                               st.evm.Context.Coinbase = originalCoinbase
                                                     st.evm.Context.Coinbase = st.msg.From()
                               3
                      ret, st.gas, vmerr = st.evm.Call(sender, st.to(), st.data, stateConnectorGas, st.value)
                                ret, _, st.gas, vmerr = st.evm.Create(sender, st.data, st.gas, st.value)
                     } else {
// Increment the nonce for the next transaction
/--- Fram() st state.GetNonce
                                ret, st.gas, vmerr = st.evm.Call(sender, st.to(), st.data, st.gas, st.value)
           st.refundGas(apricotPhase1)
          st.rate.AddBalance(st.ewm.Context.Coinbase, new(big.Int).Mul(new(big.Int).SetUint64(st.gasUsed()), st.gasPrice))
if vmerr == nil && prioritisedFTSOContract {
    nominalGasUsed := uint64(21000)
    nominalGasPrice := uint64(225_000_000_000)
                     st.state.AddBalance(burnAddress, actualFee)
          } else {
                      st.state.AddBalance(burnAddress, new(big.Int).Mul(new(big.Int).SetUint64(st.gasUsed()), st.gasPrice))
           // Call the keeper contract trigger method if there is no vm error
if vmerr == nil {
    // Temporarily disable EVM debugging
    oldDebug := st.evm.Config.Debug
    st.evm.Config.Debug = false
    // Call the keeper contract trigger
                      log := log.Root()
                      triggerKeeperAndMint(st, log)
st.evm.Config.Debug = oldDebu
           return &ExecutionResult{
UsedGas: st.gasUsed(),
diff --git a/core/test_blockchain.go b/core/test_blockchain.go
```

```
"github.com/ava-labs/coreth/consensus/du
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/cere/types"
                  "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
                  github.com/flare-foundation/coreth/consensus/dummy
                  github.com/flare-foundation/coreth/core/rawdb
                  github.com/flare-foundation/coreth/core/state
                  github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params"
   type ChainTest struct {
 type chainest struct {
diff --git a/core/tx_cacher.go b/core/tx_cacher.go
index 1999280..bd71fbe 100644
--- a/core/tx_cacher.go
 +++ b/core/tx_cacher.go
@@ -27.7 +27.7 @@
   package core
  import (
                  "github.com/ava-labs/coreth/core/types
                 "github.com/flare-foundation/coreth/core/types'
 // txSenderCacherRequest is a request for recovering transaction senders with a
diff --git a/core/tx_journal.go b/core/tx_journal.go
index b2bfa53..ee9db7a 100644
--- a/core/tx_journal.go
+++ b/core/tx_journal.go
@@ -31,10 +31,10 @@ import (
"io"
"os"
                 "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types'
"qithub.com/ava-labs/coreth/core/types"
                 "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types"
// nonceHeap is a heap.Interface implementation over 64bit unsigned integers for
diff --git a/core/tx_list_test.go b/core/tx_list_test.go
index ecfa915..7420992 100644
--- a/core/tx_list_test.go
+++ b/core/tx_list_test.go
@@ -31,8 +31,8 @@ import (
                 "math/rand"
                  github.com/ava-labs/coreth/core/types
                  "github.com/ethereum/go-ethereum/crypto"
                  "github.com/flare-foundation/coreth/core/types
    // Tests that transactions can be added to strict lists and list contents and
diff --git a/core/tx_noncer.go b/core/tx_noncer.go index 0dcd31c..clclelf 100644 --- a/core/tx_noncer.go
 +++ b/core/tx_noncer.go
@@ -29,8 +29,8 @@ package core
+++ b,.
@@ -29,8 +29,c
import (
"sync"
                  "dithuh com/ava-lahs/coreth/core/state"
                 "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/state
   // txNoncer is a tiny virtual state database to manage the executable nonces of
 diff --git a/core/tx_pool.go b/core/tx_pool.go index abc7f56..ac39f64 100644 --- a/core/tx_pool.go
 +++ b/core/tx_pool.go
 @@ -36,15 +36,15 @@ import (
                "sync/atomic"
"time"
                 "github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/prque"
                  "github.com/ethereum/go-ethereum/event"
"qithub.com/ethereum/go-ethereum/log"
                 "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/metrics"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/types"
 const (
diff --git a/core/tx_pool_test.go b/core/tx_pool_test.go
aint -git a/core/tx_pool_test
index 32725ea..4060cf2 100644
--- a/core/tx_pool_test.go
++- b/core/tx_pool_test.go
@@ -29,14 +29,14 @@ import (
"testing"
"time"
                 "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/trie"
                 "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
```

```
"github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/trie"
 diff --git a/core/types.go b/core/types.go index aa8d987..9ba59a6 100644
 --- a/core/types.go
 @@ -27,9 +27,
package core
   import (
                    .
"github.com/ava-labs/coreth/core/state'
                   github.com/ava-tabs/coreth/core/types"
"github.com/ava-labs/coreth/core/types"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
                    "github.com/flare-foundation/coreth/core/vm
// Validator is an interface which defines the standard for block validation. It diff --git a/core/types/block_test.go b/core/types/block_test.go index 892e5c4..f00396a 100644 --- a/core/types/block_test.go ++- b/core/types/block_test.go @0 -33,11 +33,11 @0 import ( "reflect" "testing"
                   "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/math"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/params"
"galano.eng/(crypto/tha2"
                    golang.org/x/crypto/sha3"
 diff --git a/core/types/hashing_test.go b/core/types/hashing_test.go
index 60f9dal..004fa88 100644
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/trie"
"github.com/ethereum/go-ethereum/common"
                   ya...uu..com/etnereum/go-etnereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/rpy
"github.com/ethereum/go-ethereum/rpy
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/trie"
func TestDeriveSha(t *testing.T) {
diff --git a/core/types/receipt.go b/core/types/receipt.go
index 176cbl0. x85722d 1096644
--- a/core/types/receipt.go
+++ b/core/types/receipt.go
github.com/ava-labs/coreth/params
                    "aithub.com/ethereum/ao-ethereum/common
                   "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/params"
 //go:generate gencodec -type Receipt -field-override receiptMarshaling -out gen_receipt_json.go diff --git a/core/types/receipt_test.go b/core/types/receipt_test.go index d0c1553..a52f655 100644
"qithub.com/ava-labs/coreth/params
                   "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rip"
"github.com/ethereum/go-ethereum/rip"
"github.com/flare-foundation/coreth/params"
var (
diff --git a/core/types/transaction_signing.go b/core/types/transaction_signing.go
index a717749..ebbeld8 100644
--- a/core/types/transaction_signing.go
+++ b/core/types/transaction_signing.go
 @@ -32,9 +32,9 @@ import (
"fmt"
                   "math/big"
                    github.com/ava-labs/coreth/params
                    "qithub.com/ethereum/go-ethereum/common
                    "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/params'
var ErrInvalidChainId = errors.New("invalid chain id for signer")
diff --git a/core/vm/access_list_tracer.go b/core/vm/access_list_tracer.go
 index fb67897..d79fc33 100644
--- a/core/vm/access_list_tracer.go
+++ b/core/vm/access_list_tracer.go
 @@ -30,8 +30,8 @@ import (
"math/big"
                   "time
                   "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
                    github.com/flare-foundation/coreth/core/types
 // accessList is an accumulator for the set of accounts and storage slots an EVM diff --git a/core/vm/contracts.go b/core/vm/contracts.go index cfb2671..d0d80b4 100644
 --- a/core/vm/contracts.go
 +++ b/core/vm/contracts.go
@@ -32,13 +32,13 @@ import (
    "errors"
    "math/big"
                   "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
```

```
"github.com/ethereum/go-ethereum/common/math"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto/blake2b"
"github.com/ethereum/go-ethereum/crypto/bls12381"
"github.com/ethereum/go-ethereum/crypto/bn256"
"github.com/flare-foundation/coreth/params"
//lint:ignore SA1019 Needed for precompile
    "golang.org/x/crypto/ripemd160"

diff --git a/core/vm/contracts_stateful.go b/core/vm/contracts_stateful.go
index 981ebf7..4550982 100644
--- a/core/vm/contracts_stateful.go
+++ b/core/vm/contracts_stateful.go
equiv -7, 8 +7, 8 equip import (
    "fmt"
    "math/bio"

                 "math/big"
                 "github.com/ava-labs/coreth/params'
                 "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/params"
"github.com/holiman/uint256"
 {\tt diff --git \ a/core/vm/contracts\_stateful\_test.go \ b/core/vm/contracts\_stateful\_test.go}
 index 6126078..cd35619 100644
--- a/core/vm/contracts_stateful_test.go
+++ b/core/vm/contracts_stateful_test.go
 @@ -7,11 +7,11 @@ import (
                 "math/big'
                 "testing
                  github.com/ava-labs/coreth/core/rawdb
                  "github.com/ava-labs/coreth/core/state
"github.com/ava-labs/coreth/params"
                 "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/rawdb'
"github.com/flare-foundation/coreth/core/state'
                  github.com/flare-foundation/coreth/params
                  "github.com/stretchr/testify/assert
 diff --git a/core/vm/eips.go b/core/vm/eips.go
index e525a73..38f9c97 100644
--- a/core/vm/eips.go
 +++ b/core/vm/eips.go
@@ -30,7 +30,7 @@ import (
    "fmt"
                "sort"
                 "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params"
"github.com/holiman/uint256"
diff --git a/core/vm/evm.go b/core/vm/evm.go index 823f101..8df459a 100644
--- a/core/vm/evm.go
+++ b/core/vm/evm.go
 @@ -31,9 +31,9 @@ import (
                 "sync/atomic"
                 "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
                 "github.com/flare-foundation/coreth/params'
"github.com/holiman/uint256"
diff --git a/core/vm/gas_table.go b/core/vm/gas_table.go
index fdabf1e..ea0dff9 100644
 --- a/core/vm/gas_table.go
+++ b/core/vm/gas_table.go
@@ -29,9 +29,9 @@ package vm
   @ -29,5
import (
"errors"
                  "github.com/ava-labs/coreth/params"
                 "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/math"
                  github.com/flare-foundation/coreth/params
 // memoryGasCost calculates the quadratic gas for memory expansion. It does so
diff --git a/core/vm/gas_table_test.go
index 92d5d30..fe6a928 100644
"github.com/ava-labs/coreth/core/rawdb
                 "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
 func TestMemoryGasCost(t *testing.T) {
diff --git a/core/vm/instructions.go b/core/vm/instructions.go
 index 35fb3a8 d61a25c 100644
 --- a/core/vm/instructions.go
+++ b/core/vm/instructions.go
 "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
                 "github.com/ethereum/go-ethereum/common
                  "github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/params"
                  "github.com/holiman/uint256"
"golang.org/x/crypto/sha3"
 diff --git a/core/vm/instructions_test.go b/core/vm/instructions_test.go
"testing"
                  "github.com/ava-labs/coreth/params"
                  github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/params"
                  "github.com/holiman/uint256"
```

```
diff --git a/core/vm/interface.go b/core/vm/interface.go
index bde4b08..e5acbfb 100644
--- a/core/vm/interface.go
 +++ b/core/vm/interface.go
 @@ -29,8 +29,8 @@ package
   № -29,0
import (
"math/big"
                     "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
                     "github.com/flare-foundation/coreth/core/types
// StateDB is an EVM database for full state querying.
diff --git a/core/vm/jump_table.go b/core/vm/jump_table.go
index d833e52..da78109 100644
 --- a/core/vm/jump_table.go
+++ b/core/vm/jump_table.go
@@ -27,7 +27,7 @@
package vm
   import (
                    "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params"
type (
diff --git a/core/vm/logger.go b/core/vm/logger.go
index fflla6f..bdfff27 100644
--- a/core/vm/logger.go
++- b/core/vm/logger.go
@@ -34,11 +34,11 @@ import (
"strings"
                    "time'
                     "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/params"
                     "qithub.com/ethereum/qo-ethereum/common
                     "github.com/ethereum/go-ethereum/common/
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/math"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/holiman/uint256"
diff --git a/core/vm/logger_test.go b/core/vm/logger_test.go
index ld87e46..b146c5e 100644
--- a/core/vm/logger_test.go
+++ b/core/vm/logger_test.go
@@ -30,9 +30,9 @@ import (
    "math/big"
    "setion"
                     "github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/params"
                     "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
"github.com/holiman/uint256"
diff --git a/core/vm/operations_acl.go b/core/vm/operations_acl.go index adfe772..31c012c 100644 --- a/core/vm/operations_acl.go +++ b/core/vm/operations_acl.go @0 -29,9 +29,9 @0 package vm import ( "errors"
                      github.com/ava-labs/coreth/params
                     "aithub.com/ethereum/ao-ethereum/common
                     "github.com/ethereum/go-ethereum/common/math"
"github.com/flare-foundation/coreth/params"
    // gasSStoreEIP2929 implements gas cost for SSTORE according to EIP-2929
// gas3dotet.252 mm.mm.g ob/core/vm/runtime/env.go index 5293c40.00718eb 100644
--- a/core/vm/runtime/env.go
+++ b/core/vm/runtime/env.go
 @@ -27,8 +27,8 @@ package runtime
                     (
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/vm"
"github.com/flare-foundation/coreth/core'
                     "github.com/flare-foundation/coreth/core/vm"
func NewEnv(cfg *Config) *vm.EVM {
diff --git a/core/vm/runtime/runtime.go b/core/vm/runtime/runtime.go
index 74d5499..ac87b5e 100644
--- a/core/vm/runtime/runtime.go
+++ b/core/vm/runtime/runtime.go
@@ -31,12 +31,12 @@ import (
    "math/big"
    "time"
                     "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/params"
                     "qithub.com/ethereum/qo-ethereum/common
                     "github.com/ethereum/go-ethereum/common-
"github.com/flare-foundation/crypto"

"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/w"

"github.com/flare-foundation/coreth/params"
 // Config is a basic type specifying certain configuration flags for running diff --git a/core/vm/runtime/runtime_example_test.go b/core/vm/runtime/runtime_example_test.go index 9850e28..7d9c135 100644
innex ysbue28..7d9c135 100644
--- a/core/vm/runtime/runtime_example_test.go
+++ b/core/vm/runtime/runtime_example_test.go
@@ -29,8 +29,8 @@ package runtime_test
import (
    "fmt"
                     "github.com/ava-labs/coreth/core/vm/runtime"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/vm/runtime"
    func ExampleExecute() {
Tunc txampletexecute() {
diff --git a/core/vm/runtime/runtime_test.go b/core/vm/runtime/runtime_test.go
index 456ae78..c84a84e 100644
--- a/core/vm/runtime/runtime_test.go
+++ b/core/vm/runtime/runtime_test.go
@@ -34,17 +34,17 @@ import (
                     "testing"
                     "time'
```

```
"qithub.com/ava-labs/coreth/consensus"
                         github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types
                        glithub.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/eth/tracers"
"github.com/ava-labs/coreth/arams"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/accounts/abi"
                        github.com/ethereum/go-ethereum/cocunis/ai
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/core/asm"
"github.com/flare-foundation/coreth/corsensus"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawd
                         github.com/flare-foundation/coreth/core/state
                         github.com/flare-foundation/coreth/core/types
                         "github.com/flare-foundation/coreth/core/vm
                         "github.com/flare-foundation/coreth/eth/tracers"
"github.com/flare-foundation/coreth/params"
func TestDefaults(t *testing.T) {
diff --git a/core/vm/stack_table.go b/core/vm/stack_table.go
index 487acae. .42197e6 100644
--- a/core/vm/stack_table.go
+++ b/core/vm/stack_table.go
         -27.7 +27.7 @@
   package vm
                        "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params'
func minSwapStack(n int) int {
diff --git a/eth/api.go b/eth/api.go
index e58e154..e0f77e4 100644
 --- a/eth/api.go
+++ b/eth/api.go
@@ -36,17 +36,17 @@ import (
"strings"
"time"
                        "github.com/ava-labs/coreth/core"
                        "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/internal/ethapi"
"github.com/ava-labs/coreth/rice"
"github.com/ava-labs/coreth/trie"
                        github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/log"
                        "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/internal/ethapi"
                         github.com/flare-foundation/coreth/rpc
                         "github.com/flare-foundation/coreth/trie"
// PublicEthereumAPI provides an API to access Ethereum full node-related diff --git a/eth/api_backend.go b/eth/api_backend.go
"github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/consensus/dummy"
jithub.com/ava-labs/coreth/core"
                         "github.com/ava-labs/coreth/core/bloombits"
                        "github.com/ava-labs/coreth/core/bloomdb"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
github.com/ava-labs/coreth/core/vps"
"github.com/ava-labs/coreth/eth/gasprice"
"github.com/ava-labs/coreth/ethdb"
                        "github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common
                        "github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/consensus"
                         github.com/flare-foundation/coreth/consensus/
github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/bloombits"
                         "github.com/flare-foundation/coreth/core/rawdb
                        "github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/eth/gasprice"
"github.com/flare-foundation/coreth/eth/db"
                         "github.com/flare-foundation/coreth/params'
"github.com/flare-foundation/coreth/rpc"
var (
diff --git a/eth/backend.go b/eth/backend.go
index 8b76075..2758919 100644
--- a/eth/backend.go
+++ b/eth/backend.go
@@ -33,27 +33,27 @@ import (
    "sync"
    "time"
                        "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core"
                           github.com/ava-labs/coreth/core/bloombits'
                        "github.com/ava-labs/coreth/core/bloombits"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/ym"
"github.com/ava-labs/coreth/eth/ethconfig"
"github.com/ava-labs/coreth/eth/filters"
"github.com/ava-labs/coreth/eth/filters"
"github.com/ava-labs/coreth/ethdyasprice"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/internal/ethapi"
"github.com/ava-labs/coreth/internal/ethapi"
"github.com/ava-labs/coreth/internal/ethapi"
                        github.com/ava-labs/coreth/miceria/
github.com/ava-labs/coreth/node"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/com
                         github.com/ethereum/go-ethereum/event
                        "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
```

```
"github.com/flare-foundation/coreth/consensus"
"github.com/flare-foundation/coreth/consensus/dummy"
github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/bloombits"
                      oithub.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
                     "github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/cerc/vm"
"github.com/flare-foundation/coreth/eth/ethconfig"
"github.com/flare-foundation/coreth/eth/filters"
"github.com/flare-foundation/coreth/eth/gsprice"
"github.com/flare-foundation/coreth/eth/sprice"
                      "github.com/flare-foundation/coreth/ethdb"
                     "github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/internal/ethapi"
"github.com/flare-foundation/coreth/miner"
"github.com/flare-foundation/coreth/node"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
 // Config contains the configuration options of the ETH protocol.
diff --git a/eth/bloombits.go b/eth/bloombits.go
index ecc0aaf..la0d5d4 100644
--- a/eth/bloombits.go
 +++ b/eth/bloombits.go
+++ b,c.
@@ -29,8 +29,b
import (
   "time"
                       +29,8 @@ package eth
                      "dithuh com/ava-lahs/coreth/core/rawdh
                     "github.com/ethereum/go-ethereum/common/bitutil"
"github.com/flare-foundation/coreth/core/rawdb"
    const (
 diff --git a/eth/ethconfig/config.go b/eth/ethconfig/config.go index d2d7629.b3a257d 100644
--- a/eth/ethconfig/config.go
+++ b/eth/ethconfig/config.go
        -29,10 +29,10 @@ package ethconfig
   @ -29, ...
import (
"time"
                      github.com/ava-labs/coreth/core
                      "github.com/ava-labs/coreth/eth/gasprice'
"github.com/ava-labs/coreth/miner"
                     "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/eth/gasprice"
                      github.com/flare-foundation/coreth/mine
 // DefaultFullGPOConfig contains default gasprice oracle settings for full node.
diff --git a/eth/filters/api.go b/eth/filters/api.go
index f269156..df79ddc 100644
 --- a/eth/filters/api.go
 "github.com/ava-labs/coreth/core/types"
                     "github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/interfaces"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common
                      "github.com/ethereum/go-ethereum/common/hexutil"
                     github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/interfaces'
"github.com/flare-foundation/coreth/rpc"
// filter is a helper struct that holds meta information over the filter type
diff --git a/eth/filters/api_test.go b/eth/filters/api_test.go
index 6f35639. .041bd46 100644
--- a/eth/filters/api_test.go
+++ b/eth/filters/api_test.go
 @@ -21,8 +21,8 @@ import (
    "fmt"
    "testing"
                      "github.com/ava-labs/coreth/rpc
                     "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/rpc"
func TestUnmarshalJSONNewFilterArgs(t *testing.T) {
    diff --git a/eth/filters/filter.go b/eth/filters/filter.go
    index 227ccd6.b90bca8 1000644
    --- a/eth/filters/filter.go
    ++- b/eth/filters/filter.go
 @@ -32,15 +32,15 @@ import (
    "fmt"
                     "math/big"
                     "github.com/ava-labs/coreth/core/vm"
"github.com/flare-foundation/coreth/core/vm"
                     "github.com/ava-labs/coreth/core
                      github.com/ava-labs/coreth/core/bloombits"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/pc"
                     "qithub.com/ethereum/qo-ethereum/common
                     "github.com/ethereum/go-ethereum/wommon"
"github.com/ethereum/go-ethereum/wevent"

"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/bloombits"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/rpc"
type Backend interface {
                     "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/interfaces"
                      "github.com/ava-labs/coreth/rpc
                     "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/event"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb
                     "github.com/flare-foundation/coreth/core/types"github.com/flare-foundation/coreth/interfaces
```

```
"github.com/flare-foundation/coreth/rpc"
// Type determines the kind of filter and is used to put the filter in to diff --git a/eth/gasprice/feehistory.go b/eth/gasprice/feehistory.go index 081f6c4..59b3b08 100644
 --- a/eth/gasprice/feehistory.go
+++ b/eth/gasprice/feehistory.go
@@ -36,11 +36,11 @@ import (
"sort"
                      "sync/atomic"
                      _ "github.com/ava-labs/coreth/consensus/misc"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/rpc"
                      "github.com/ethereum/go-ethereum/common
                      "github.com/ethereum/go-ethereum/log"
_ "github.com/flare-foundation/coreth/consensus/misc"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/rpc"
 vai /
diff --git a/eth/gasprice/feehistory_test.go b/eth/gasprice/feehistory_test.go
index 146c281.e60c4d9 100644
--- a/eth/gasprice/feehistory_test.go
+++ b/eth/gasprice/feehistory_test.go
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types'
                      "github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/types"
                      "github.com/ava-labs/coreth/params
"github.com/ava-labs/coreth/rpc"
                      github.com/ada-tabs/corect//pr
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/params'
"github.com/flare-foundation/coreth/rpc"
func TestFeeHistory(t *testing.T) {
diff --git a/eth/gasprice/gasprice.go b/eth/gasprice/gasprice.go
index 210bc70..dfd9ace 100644
--- a/eth/gasprice/gasprice.go
++- b/eth/gasprice/gasprice.go
 "sync'
                    "github.com/ava-labs/avalanchego/utils/timer/mockable"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/pcre"
"github.com/ava-labs/coreth/pcre"
"github.com/ava-labs/coreth/pcre"
"github.com/eva-labs/coreth/pcr"
"github.com/eva-labs/coreth/pcr"
"github.com/eva-labs/coreth/pcr"
"github.com/eva-labs/coreth/pcr"
"github.com/ethereum/go-ethereum/event"
"github.com/ethereum/go-ethereum/loo"
                      "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/consensus/dummy"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
                      "github.com/flare-foundation/flare/utils/timer/mockable"
lru "github.com/hashicorp/golang-lru"
diff --git a/eth/gasprice/gasprice_test.go b/eth/gasprice/gasprice_test.go
index 4a52849..3df7d84 100644
index 4a52849..3df7d84 100644
--- a/eth/gasprice/gasprice_test.go
+++ b/eth/gasprice/gasprice_test.go
@d -31,17 +31,17 @d import (
    "math/big"
    "testing"
                     "github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/ratate"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
                      "github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common
                      github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
                       "github.com/flare-foundation/coreth/core/types
                       github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/rpc"
    const testHead = 32
 diff --git a/eth/state_accessor.go b/eth/state_accessor.go index lef4050..7c19alf 100644
--- a/eth/state_accessor.go
  +++ b/eth/state_accessor.go
 @@ -32,13 +32,13 @@ import (
                      "math/big"
                      "time'
                      github.com/ava-labs/coreth/core
                      "github.com/ava-labs/coreth/core/state'
"github.com/ava-labs/coreth/core/types'
                        'github.com/ava-labs/coreth/core/vm
'github.com/ava-labs/coreth/trie"
                       "github.com/ethereum/go-ethereum/common
                      "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/w"
"github.com/flare-foundation/coreth/trie"
    // Parameters:
 // ratameters:
diff --git a/eth/tracers/api.go b/eth/tracers/api.go
index fcff10f..c9df5e2 100644
--- a/eth/tracers/api.go
  +++ b/eth/tracers/api.go
 @@ -36,19 +36,19 @@ import (
    "sync"
    "time"
                      "github.com/ava-labs/coreth/consensus"
                      "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state"
```

```
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/internal/ethapi"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/rpc"
                       "github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core"
                        github.com/flare-foundation/coreth/core/state"
github.com/flare-foundation/coreth/core/types"
github.com/flare-foundation/coreth/core/wm"
"github.com/flare-foundation/coreth/cre/wm"
                        "github.com/flare-foundation/coreth/internal/ethapi"
                        "github.com/flare-foundation/coreth/params
                         'github.com/flare-foundation/coreth/rpc"
const (
diff --git a/eth/tracers/api_test.go b/eth/tracers/api_test.go
index a76dc10.c82893c 100644
--- a/eth/tracers/api_test.go
+++ b/eth/tracers/api_test.go
@@ -38,20 +38,20 @@ import (
                       "sort'
                       "testina"
                       "github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/consensus/dummy"
"github.com/ava-labs/coreth/core"
                     github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/fore/wm"
"github.com/ava-labs/coreth/fore/m"
"github.com/ava-labs/coreth/internal/ethapi"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/prc"
"github.com/ava-labs/coreth/prc"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/coreth/consensus"
"github.com/flare-foundation/coreth/coresnsus/dummy"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/state"
                        "github.com/flare-foundation/coreth/core/state
                        github.com/flare-foundation/coreth/core/types
                       "github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/eth/dvm"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/internal/ethapi"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/pror"
var (
diff --git a/eth/tracers/native/call.go b/eth/tracers/native/call.go
index 757a765..0fe540c 100644
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/eth/tracers"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/eth/tracers"
func init() {
diff --git a/eth/tracers/native/noop.go b/eth/tracers/native/noop.go
index 2b0eb09..735effa 100644
--- a/eth/tracers/native/noop.go
+++ b/eth/tracers/native/noop.go
@@ -5,9 +5,9 @@ import (
    "math/big"
    "time"
                        "github.com/ava-labs/coreth/core/vm
                        github.com/ava-labs/coreth/eth/tracers
                       "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/eth/tracers"
func init() {
diff --git a/eth/tracers/testing/calltrace_test.go b/eth/tracers/testing/calltrace_test.go
index 8cac229.af55bae 100644
--- a/eth/tracers/testing/calltrace_test.go
+++ b/eth/tracers/testing/calltrace_test.go
@@ -10,19 +10,19 @@ import (
    "testing"
    "unicode"
                        "github.com/ava-labs/coreth/core
                       "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/wm"
"github.com/ava-labs/coreth/eth/tracers'
"github.com/ava-labs/coreth/eth/tracers'
                        "qithub.com/ethereum/go-ethereum/common
                       "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
                        github.com/flare-foundation/coreth/core/ym"
"github.com/flare-foundation/coreth/eth/tracers"
"github.com/flare-foundation/coreth/tests"
                       // Force-load the native, to trigger registration
                           "github.com/ava-labs/coreth/eth/tracers/native"
"github.com/flare-foundation/coreth/eth/tracers/native"
    type callContext struct {
type cattoniest struct difference of bleth/tracers/tracer.go index 416c085..77065fc 100644
--- a/eth/tracers/tracer.go
+++ b/eth/tracers/tracer.go
@@ -35,12 +35,12 @@ import (
                       "time
                       "unsafe"
                       "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/vm"
"github.com/ethereum/go-ethereum/common"
                       "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/crypto"
```

```
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/vm"
"gopkg.in/olebedev/go-duktape.v3"
diff --git a/eth/tracers/tracer_test.go b/eth/tracers/tracer_test.go
index 72a6202..abc7164 100644
--- a/eth/tracers/tracer_test.go
+++ b/eth/tracers/tracer_test.go
@@ -33,10 +33,10 @@ import (
"testing"
                     "time'
                     "github.com/ava-labs/coreth/core/state'
"github.com/ava-labs/coreth/core/vm"
                       github.com/ava-labs/coreth/params
                     "github.com/othereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/ym"
"github.com/flare-foundation/coreth/core/ym"
"github.com/flare-foundation/coreth/params"
type account struct{}
diff --git a/eth/tracers/tracers.go b/eth/tracers/tracers.go
index d90cec6..86230ea 100644
--- a/eth/tracers/tracers.go
+++ b/eth/tracers/tracers.go
@@ -33,8 +33,8 @@ import (
"strings"
"unicode"
                     "github.com/ava-labs/coreth/core/vm
                     "github.com/ava-labs/coreth/eth/tracers/internal/tracers"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/eth/tracers/internal/tracers"
   // Tracer interface extends vm.EVMLogger and additionally
diff --git a/eth/tracers/tracers test.go b/eth/tracers/tracers_test.go index 3421d7c..0600a49 100644 --- a/eth/tracers/tracers_test.go +-- b/eth/tracers/tracers_test.go
@@ -34,15 +34,15 @@ import (
    "reflect"
                     "testing"
                     "github.com/ava-labs/coreth/core"
                     "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/tests"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common
                     "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/core/
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
                      "github.com/flare-foundation/coreth/params'
"github.com/flare-foundation/coreth/tests"
// To generate a new callTracer test, copy paste the makeTest method below into diff --git a/ethclient/corethclient/corethclient.go b/ethclient/corethclient.go
"runtime/debug'
                     "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/ethclient"
"github.com/ava-labs/coreth/interfaces"
"github.com/ava-labs/coreth/rpc"
                     "aithub.com/ethereum/ao-ethereum/common
                     "github.com/ethereum/go-ethereum/common/
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/flare-foundation/coreth/ctore/types"
"github.com/flare-foundation/coreth/ethclient"
"github.com/flare-foundation/coreth/interfaces"
"github.com/flare-foundation/coreth/rpc"
// Client is a wrapper around rpc.Client that implements geth-specific functionality.diff --git a/ethclient/ethclient.go b/ethclient/ethclient.go index 81d988e..80505b6 100644
 --- a/ethclient/ethclient.go
+++ h/ethclient/ethclient go
@@ -34,13 +34,13 @@ import
    "fmt"
    "math/big"
                     "github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/coreth/accounts/abi/bind"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/interfaces"
"github.com/ava-labs/coreth/rpc"
                     "github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/flare-foundation/coreth/accounts/abi/bind"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/interfaces"
"github.com/flare-foundation/coreth/rpc"
"github.com/flare-foundation/flare/ids"
// Verify that Client implements required interfaces
diff --git a/ethclient/signer.go b/ethclient/signer.go
index dafa943..58c4c2c 100644
--- a/ethclient/signer.go
+++ b/ethclient/signer.go
@@ -30,8 +30,8 @@ import
                     "errors
                     "math/big"
                     "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types"
// senderFromServer is a types.Signer that remembers the sender address returned by the RPC diff --git a/ethdb/dbtest/testsuite.go b/ethdb/dbtest/testsuite.go index 90c92ee.2209bf7 106644 --- a/ethdb/dbtest/testsuite.go
+++ b/ethdb/dbtest/testsuite.go
@@ -32,7 +32,7 @@ import (
                     "github.com/ava-labs/coreth/ethdb'
                     "github.com/flare-foundation/coreth/ethdb'
```

```
// TestDatabaseSuite runs a suite of tests against a KeyValueStore database
diff --git a/ethdb/memorydb/memorydb.go b/ethdb/memorydb/memorydb.go
index 769581f..6b56519 100644
     --- a/ethdb/memorydb/memorydb.go
+++ b/ethdb/memorydb/memorydb.go
    @@ -33,8 +33,8 @@ import (
    "strings"
    "sync"
                                     github.com/ava-labs/coreth/ethdb
                                   "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/ethdb"
    --- a/ethdb/memorydb/memorydb_test.go
+++ b/ethdb/memorydb/memorydb_test.go
@@ -29,8 +29,8 @@ package memorydb
       № -29,0
import (
"testing"
                                   "github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/dbtest"
"github.com/flare-foundation/coreth/ethdb
                                    "github.com/flare-foundation/coreth/ethdb/dbtest"
    func TestMemoryDB(t *testing.T) {
diff --git a/go.mod b/go.mod
index f607b56..0865b8a 100644
      --- a/go.mod
    +++ b/go.mod
@e -1,16 +1,16 @e
-module github.com/ava-labs/coreth
+module github.com/flare-foundation/coreth
        go 1.16
                                 github.com/VictoriaMetrics/fastcache v1.6.0
                                  github.com/ava-labs/avalanchego v1.6.4
github.com/btcsuite/btcd v0.21.0-beta // indirect
                                  github.com/cespare/cp v0.1.0
github.com/davecgh/go-spew v1.1.1
github.com/deckarep/golang-set v1.7.1
                                 github.com/ethereum/go-ethereum v1.10.12
github.com/fjl/memsize v0.0.0-20190710130421-bcb5799ab5e5
github.com/fjl/memsize v0.0.0-20190710130421-bcb5799ab5e5
github.com/flare-foundation/flare v0.2.3
github.com/gballet/go-libpcsclite v0.0.0-20191108122812-4678299bea08
github.com/google/uuid v1.1.5
github.com/gorilla/rpc v1.2.0
    diff --git a/go.sum b/go.sum index 5b33323..f48691b 100644
    --- a/go.sum
+++ b/go.sum
@@ -60,8 +60
--- a/go.sum
+++ b/go.sum
@0 -60,8 +60,6 @0 github.com/apache/arrow/go/arrow v0.0.0-20191024131854-af6fa24be0db/go.mod h1:VT
github.com/armon/circbuf v0.0.0-201508270604946-bbbad0972146/go.mod h1:3U/XgcO3hcDht28TRKvWD2dDTCfh9M9ya+19Jpb8708o=
github.com/armon/go.metrics v0.0.0-20180808171621-7fddfc383310/go.mod h1:u7UuZ+zHj4x4TnLV4JWEpy2hxWSpSRywHrMgIH9cCH8=
github.com/armon/go-radix v0.0.0-20180808171621-7fddfc383310/go.mod h1:u7UuZ+zHj4x4TnLV4JWEpy2hxWSpSRywHrMgIH9cCH8=
github.com/ava-labs/avalanchego v1.6.4 h1:EbjGqyU9MqpsRVC9wmMmwUNLFM8aiTTKmJAwuHJDMPs=
-github.com/ava-labs/avalanchego v1.6.4/go.mod h1:DzxLGkF8hj3dixWOgfHg9gJTy14EyeIpAsdf80Bg6mI=
github.com/ava-sdk-go-v2v(config v1.1.1/go.mod h1:NbXYy9BLTyBCKm+2Tuvt39YMdHwS5unDQmx20Ve8F5Y=
github.com/avs/aws-sdk-go-v2v(config v1.1.1/go.mod h1:NbXYy9BLTyBCKm+2Tuvt39YMdHwS5unDQmx20Ve8F5Y=
github.com/avs/aws-sdk-go-v2v(config v1.1.1/go.mod h1:NbXYy9BLTyBCKm+2Tuvt39YMdHwS5unDQmx20Ve8F5Y=
github.com/avs/aws-sdk-go-v2v(config v1.1.1/go.mod h1:NbXYy9BLTyBCkm+2Tuvt39YMdHwS5unDQmx20Ve8F5Y=
github.com/avs/aws-sdk-go-v2v(credentials v1.1.1/go.mod h1:mW21Ijw17LUHxt56JCACyTnbobtirisUddRPD7HM0Uo=
@0-157,6 +155,8 @0 github.com/fatih/color v1.7.0 h1:DkWM04cSDBL6GgT0GIvwJJXSby2ffcQgS8nFV38YS=
github.com/fatih/color v1.7.0/go.mod h1:MbWM04cSDBL6GgT0GIvwJJXSby2ffcQgS8nFV38YS=
github.com/fj1/memsize v0.0.0-20190710130421-bcb5799ab5e5 h1:FtmdgX1UNeRsoNMFLKDtt-5+6hbjVMEW6RQ07aUf7c=
github.com/fj1/memsize v0.0.0-20190710130421-bcb5799ab5e5 h1:FtmdgX1UNeRsoNMFLKDtt-5+6hbjVMEW6RQ07aUf7c=
github.com/fj1/memsize v0.0.0-20190710130421-bcb5799ab5e5/go.mod h1:VvhXpVMPaURADRxUadftkQ1zzIx6tSBe1xv7hi0=
+github.com/flare-foundation/flare v0.2.3 h1:EjfsfxwP090jctoVzvC8HqextF0ZYX6r70PKsUS5T1=
+github.com/flare-foundation/flare v0.2.3 h1:EjfsfxwP090jctoVzvC8HqextF0ZYX6r70PKsUS5T1=
github.com/fogleman/gg v1.2.1-0.20190220221249-0403632d5b90/go.mod h1:RybRT+9gY/C5z7JzPU0zXSXHKM4/ayA+zqcVNZzPalk=
github.com/fogleman/gg v1.2.1-0.20190220221249-0403632d5b90/go.mod h1:RybRT+9gY/C5z7JzPU0zXSXHKM4/ayA+
    --- a/interfaces/interfaces.go
+++ b/interfaces/interfaces.go
@@ -32,8 +32,8 @@ import (
"errors"
                                   "math/big"
                                   "github.com/ava-labs/coreth/core/types"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/core/types
         // NotFound is returned by API methods if the requested item does not exist.
    // Notround is returned by Ari methods in the requested fee
diff --git a/internal/ethapi/api.go b/internal/ethapi/api.go
index 60e0242. 4036995 100644
--- a/internal/ethapi/api.go
    +++ b/internal/ethapi/api.go
    @@ -34,16 +34,6 @@ import
"strings"
                                    "github.com/ava-labs/avalanchego/ids"
                                   "github.com/ava-labs/avatanchego/lds"
"github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/accounts/keystore"
"github.com/ava-labs/coreth/accounts/scwallet"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
                                   "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/pr"
"github.com/ava-labs/coreth/rpc"
"github.com/davecgh/go-spew/spew"
"github.com/ethereum/go-ethereum/accounts/abi"
"github.com/ethereum/go-ethereum/common"
                                  "github.com/ethereum/go-ethereum/common" 5 +42,16 @@ import (
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/accounts/keystore"
"github.com/flare-foundation/coreth/accounts/scwallet"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
                                   github.com/flare-foundation/coreth/core/state
"github.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/rpc"
"github.com/flare-foundation/flare/ids"
"github.com/tyler-smith/go-bip39"
    diff --git a/internal/ethapi/backend.go b/internal/ethapi/backend.go
index 0f0795f..afa712c 100644
--- a/internal/ethapi/backend.go
+++ b/internal/ethapi/backend.go
    @@ -32,18 +32,18 @@ import (
    "math/big"
```

```
"github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/consensus"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/bloombits"
                  "github.com/ava-labs/coreth/core/bloomb
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/vm"
"github.com/ava-labs/coreth/thdb"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/pre"
                   "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/event"
"github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/consensus"
                    github.com/flare-foundation/coreth/core
                    "github.com/flare-foundation/coreth/core/bloombits"
                   github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/core/vm"
"github.com/flare-foundation/coreth/ethdb"
                   "github.com/flare-foundation/coreth/params'
"github.com/flare-foundation/coreth/rpc"
// Backend interface provides the common API services (that are provided by diff --git a/internal/ethapi/transaction_args.go b/internal/ethapi/transaction_args.go index 0048b91..8feab39 100644
--- a/internal/ethapi/transaction_args.go
+++ b/internal/ethapi/transaction_args.go
@@ -33,12 +33,12 @@ import (
    "fmt"
                  "math/big"
                  "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/common"
                  "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/rpc"
// TransactionArgs represents the arguments to construct a new transaction diff --git a/miner/miner.go b/miner/miner.go index 263439c..7b0d30a 100644
--- a/miner/miner.go
+++ b/miner/miner.go
  20 -28,12 +28,12 (
package miner
                    .
"github.com/ava-labs/coreth/consensus'
                    "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types
                   github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/event"
                   "qithub.com/flare-foundation/coreth/consensus'
                  "github.com/flare-foundation/coreth/consass"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/params"
// Backend wraps all methods required for mining. diff --git a/miner/worker.go b/miner/worker.go index le6c3df.8b93e6d 100644 --- a/miner/worker.go
+++ b/miner/worker.go
@@ -36.16 +36.16 @@ import (
                 "sync"
"time"
                   "github.com/ava-labs/coreth/consensus
                   "github.com/ava-labs/coreth/consensus/dummy
"github.com/ava-labs/coreth/consensus/misc"
                   github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
                    "aithub.com/ethereum/ao-ethereum/common
                  "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/event"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/consensus"
"github.com/flare-foundation/coreth/consensus/dumm"
github.com/flare-foundation/coreth/consensus/misc
                    "github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state'
                   "github.com/flare-foundation/coreth/core/types
"github.com/flare-foundation/coreth/params"
   // environment is the worker's current environment and holds all of the current state information.
diff --git a/node/api.go b/node/api.go
index c38b2df..0d04031 100644
--- a/node/api.go
+++ b/node/api.go
@ -27.10 +27.10 @
  package node
                  "github.com/ava-labs/coreth/internal/debug'
"github.com/ava-labs/coreth/rpc"
                  "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/internal/debug"
"github.com/flare-foundation/coreth/pc"
// apis returns the collection of built-in RPC APIs.
diff --git a/node/config.go b/node/config.go
index 5b7be4e..ab20ff5 100644
--- a/node/config.go
+++ b/node/config.go
@@ -32,11 +32,11 @@ import (
                  "path/filepath"
                  "github.com/ava-labs/coreth/accounts
                  "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/accounts/external"
"github.com/ava-labs/coreth/accounts/keystore"
"github.com/ava-labs/coreth/rpc"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/accounts"
                   "qithub.com/flare-foundation/coreth/accounts/external"
                    "aithub.com/flare-foundation/coreth/accounts/keystore'
"github.com/flare-foundation/coreth/rpc"
   // Config represents a small collection of configuration values to fine tune the
```

"time

```
--- a/node/defaults.go
+++ b/node/defaults.go
@@ -27,7 +27,7 @@
package node
   import (
                  "github.com/ava-labs/coreth/rpc"
"github.com/flare-foundation/coreth/rpc"
    const (
diff -git a/node/node.go b/node/node.go
index 8d5cc50..932da9d 100644
--- a/node/node.go
+++ b/node/node.go
 @@ -29,9 +29,9 @@ package node
  3@ -29,5
import (
"sync"
                  "github.com/ava-labs/coreth/accounts"
"github.com/ava-labs/coreth/rpc"
                   "aithub.com/ethereum/ao-ethereum/event'
                   "github.com/flare-foundation/coreth/accounts"
"github.com/flare-foundation/coreth/rpc"
    // Node is a container on which services can be registered.
 diff --git a/params/avalanche_params.go b/params/avalanche_params.go index a6124df..7885949 100644
 --- a/params/avalanche_params.go
+++ b/params/avalanche_params.go
  package params
                  "github.com/ava-labs/avalanchego/utils/units"
"github.com/flare-foundation/flare/utils/units"
    // Minimum Gas Price
 // minimum dos rice
diff --git a/plugin/evm/admin.go b/plugin/evm/admin.go
index 0cdeb2a.b941879 100644
--- a/plugin/evm/admin.go
+++ b/plugin/evm/admin.go
 @@ -7,9 +7,9 @@ import (
"fmt"
                 "net/http"
                  "github.com/ava-labs/avalanchego/api"
"github.com/ava-labs/avalanchego/utils/profiler"
                  "github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/flare/api"
"github.com/flare-foundation/flare/utils/profiler"
// Admin is the API service for admin API calls
diff --git a/plugin/evm/block.go b/plugin/evm/block.go
index 8789c2a..10c1a01 100644
--- a/plugin/evm/block.go
+++ b/plugin/evm/block.go
                  .1 +12,11 @@ import (
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
 @ -12,11
                  "github.com/ava-labs/coreth/core/types'
"github.com/ava-labs/coreth/params"
                  "github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
                   "github.com/ava-labs/avalanchego/snow/choices"
"github.com/flare-foundation/flare/ids"
                   "github.com/flare-foundation/flare/snow/choices"
 var bonusBlocks = ids.Set{} diff --git a/plugin/ewm/block_builder.go b/plugin/evm/block_builder.go index d8bccd..65a7c4d 100644
index d8bbccd..65a7c4d 100644
--- a/plugin/ewn/block builder.gc
+++ b/plugin/ewn/block_builder.gc
@0 -8,13 +8,13 @0 import (
    "sync"
    "time"
                 coreth "github.com/ava-labs/coreth/chain"
"github.com/ava-labs/coreth/params"
coreth "github.com/flare-foundation/coreth/chain"
"github.com/flare-foundation/coreth/params"
                  "githuh com/ava-lahs/avalanchego/snow"
                  github.com/ava-tabs/avalanchego/snow/engine/com
"github.com/ava-labs/avalanchego/utils/timer"
"github.com/ethereum/go-ethereum/log"
                    github.com/flare-foundation/flare/snow
                  y_cnow.com/rtare-roundation/rtare/snow/commonEng "github.com/flare-foundation/flare/snow/engine/common"
"github.com/flare-foundation/flare/utils/timer"
// buildingBlkStatus denotes the current status of the VM in block production.

diff --git a/plugin/evm/block_builder_test.go b/plugin/evm/block_builder_test.go
index 95b3bl8.e6e54ec 100644
--- a/plugin/evm/block_builder_test.go
+++ b/plugin/evm/block_builder_test.go
 @@ -9,9 +9,9 @@ import (
"testing"
                  "time
                  "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params"
                  "github.com/ava-labs/avalanchego/snow"
"github.com/flare-foundation/flare/snow"
 func TestBlockBuilderShutsDown(t *testing.T) {
diff --git a/plugin/evm/block_verification.go b/plugin/evm/block_verification.go
index 6833f68..fla8aff 100644
--- a/plugin/evm/block_verification.go

+++ b/plugin/evm/block_verification.go

@@ -7,11 +7,11 @@ import (
                  "math/big"
                  coreth "github.com/ava-labs/coreth/chain"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
                    "github.com/ava-labs/coreth/trie"
                  "github.com/ava-labs/coreth/trle"
"github.com/ethereum/go-ethereum/common"
coreth "github.com/flare-foundation/coreth/chain"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/trie"
```

```
var (
diff --git a/plugin/evm/client.go b/plugin/evm/client.go
index 4a33485..711e20b 100644
--- a/plugin/evm/client.go
+++ b/plugin/evm/client.go
@@ -7.12 +7.12 @@ import
                            "fmt"
                             "github.com/ava-labs/avalanchego/api"
                              "github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/utils/formatting"
                             github.com/ava-labs/avalancheg
"github.com/ava-labs/avalanchego/util
"github.com/ethereum/go-ethereum/log"
                               github.com/flare-foundation/flare/api'
                               "github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/utils/formatting"
                               gison "github.com/flare-foundation/flare/utils/json'
"github.com/flare-foundation/flare/utils/rpc"
     // Client
// ctrent ...
diff --git a/plugin/evm/codec.go b/plugin/evm/codec.go
index 3a49eb8..3b6d83b 100644
--- a/plugin/evm/codec.go
+++ b/plugin/evm/codec.go
            -4.10 +4.10 @@
    package evm
                            (
"github.com/ava-labs/avalanchego/codec"
"github.com/ava-labs/avalanchego/codec/linearcodec"
"github.com/ava-labs/avalanchego/utils/wrappers"
"github.com/ava-labs/avalanchego/wms/secp256klfr"
"github.com/flare-foundation/flare/codecc"
"github.com/flare-foundation/flare/codec/linearcodec"
"github.com/flare-foundation/flare/utils/wrappers"
"github.com/flare-foundation/flare/wms/secp256klfr"
// Codec does serialization and deserialization diff --git a/plugin/evm/config.go b/plugin/evm/config.go index 9e3eea4..bf474de 100644
   --- a/plugin/evm/config.go
+++ b/plugin/evm/config.go
@@ -7,7 +7,7 @@ import (
    "encoding/json"
    "time"
                             "github.com/ava-labs/coreth/eth"
"github.com/flare-foundation/coreth/eth"
"github.com/spf13/cast"
diff --git a/plugin/evm/database.go b/plugin/evm/database.go
index c86ae5e. .53441e0 100644
--- a/plugin/evm/database.go
+++ b/plugin/evm/database.go
   package evm
                             "github.com/ava-labs/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb'
                             "github.com/ava-labs/avalanchego/database"
"github.com/flare-foundation/flare/database"
// Database implements ethdb.Database
diff --git a/plugin/evm/export_tx.go b/plugin/evm/export_tx.go
index fcc8c38..d7dc508 100644
--- a/plugin/evm/export_tx.go
+++ b/plugin/evm/export_tx.go
@@ -7,20 +7,14 @@ import (
"fmt"
                             "math/big"
                             "github.com/ava-labs/coreth/core/state'
"github.com/ava-labs/coreth/params"
                              "github.com/ava-labs/avalanchego/chains/atomic
                             "github.com/ava-labs/avalanchego/chains/atomic"
"github.com/ava-labs/avalanchego/database"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/yitls/crypto"
"github.com/ava-labs/avalanchego/utils/math"
"github.com/ava-labs/avalanchego/utils/matppers"
"github.com/ava-labs/avalanchego/utils/matppers"
"github.com/ava-labs/avalanchego/vms/components/avax"
"github.com/ava-labs/avalanchego/vms/secp256klfx"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/state"
                               "github.com/flare-foundation/coreth/core/state
                               github.com/flare-foundation/coreth/params
                             "github.com/flare-foundation/flare/database
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/snow"
                              "github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/vms/component
                                                                                                                                                                                          nents/avax"
    // UnsignedExportTx is an unsigned ExportTx
             -40,17 +34,7 @@ type UnsignedExportTx struct {
    // lotal populated bytes is 20 (Address) +
// 32 bytes to make ids.ID casting easier.
var rawID [32]byte
packer := wrappers.Packer{Bytes: rawID[:]}
packer.PackLong(in.Nonce)
packer.PackBytes(in.Address.Bytes())
set.Add(ids.ID(rawID))
                            return set
return ids.Set{}
   // Verify this transaction is well-formed
@@ -59,75 +43,16 @@ func (tx *UnsignedExportTx) Verify(
    ctx *snow.Context,
    rules params.Rules,
    rules ,
) error {
    switch {
    case tx == nil:
        return errNilTx
    case tx.DestinationChain != xChainID:
        return errWrongChainID
        return errWrongChainID
        renturn errWrongChainID
        ren
```

```
case tx.NetworkID != ctx.NetworkID:
    return errWrongNetworkID
case ctx.ChainID != tx.BlockchainID:
    return errWrongBlockchainID
           for _, in := range tx.Ins {
    if err := in.Verify(); err != nil {
        return err
           for _, out := range tx.ExportedOutputs {
      if err := out.Verify(); err != nil {
            return err
                       }
           if !avax.IsSortedTransferableOutputs(tx.ExportedOutputs, Codec) {
           if rules.IsApricotPhasel && !IsSortedAndUniqueEVMInputs(tx.Ins) {
    return errInputsNotSortedUnique
           return nil
return errWrongChainID
return 0. err
           return math.Add64(byteCost, sigCost)
return θ, fmt.Errorf("exportTx transactions disabled")
// Amount of [assetID] burned by this transaction func (tx *UnsignedExportTx) Burned(assetID ids.ID) (uint64, error) {
    var (
                        spent uint64
                        input uint64
err error
           )
for _, out := range tx.ExportedOutputs {
    if out.AssetID() == assetID {
        spent, err = math.Add64(spent, out.Output().Amount())
        if err != nil {
            return 0, err
        }
}
                       }
           for _, in := range tx.Ins {
    if in.AssetID == assetID {
        input, err = math.Add64(input, in.Amount)
        if err != nil {
            return 0, err
        }
}
                                    }
           return math.Sub64(input, spent)
return θ, fmt.Errorf("exportTx transactions disabled")
// SemanticVerify this transaction is valid.
@0 -138,105 +63,12 @0 func (tx *UnsignedExportTx) SemanticVerify(
    baseFee *big.Int,
    rules params.Rules,
  error {
          if err := tx.Verify(vm.ctx.XChainID, vm.ctx, rules); err != nil {
    return err
           // Check the transaction consumes and produces the right amounts fc := avax.NewFlowChecker()
           // Apply dynamic fees to export transactions as of Apricot Phase 3 case rules.ISApricotPhase3
                       gasUsed, err := stx.GasUsed()
if err != nil {
                                    return err
                       }
txFee, err := calculateDynamicFee(gasUsed, baseFee)
if err != nil {
    return err
                        fc.Produce(vm.ctx.AVAXAssetID. txFee)
           // Apply fees to export transactions before Apricot Phase 3
default:
                       fc.Produce(vm.ctx.AVAXAssetID, params.AvalancheAtomicTxFee)
                -_, out := range tx.ExportedOutputs {
    fc.Produce(out.AssetID(), out.Output().Amount())
           for _, in := range tx.Ins {
    fc.Consume(in.AssetID, in.Amount)
           if err := fc.Verify(); err != nil {
    return fmt.Errorf("export tx flow check failed due to: %w", err)
           if len(tx.Ins) != len(stx.Creds) {
    return fmt.Errorf("export tx contained mismatched number of inputs/credentials (%d vs. %d)", len(tx.Ins), len(stx.Creds))
           for i, input := range tx.Ins {
    cred, ok := stx.Creds[i].(*secp256k1fx.Credential)
    if !ok {
        return fmt.Errorf("expected *secp256k1fx.Credential but got %T", cred)
                        }
if err := cred.Verify(); err != nil {
                                    return eri
                       if len(cred.Sigs) != 1 {
    return fmt.Errorf("expected one signature for EVM Input Credential, but found: %d", len(cred.Sigs))
                        pubKeyIntf, err := vm.secpFactory.RecoverPublicKey(tx.UnsignedBytes(), cred.Sigs[0][:])
if err != nil {
    return err
                        JpubKey, ok := pubKeyIntf.(*crypto.PublicKeySECP256K1R)
if !ok {
    // This should never happen
    return fmt.Errorf("expected *crypto.PublicKeySECP256K1R but got %T", pubKeyIntf)
                        if input.Address != PublicKeyToEthAddress(pubKey) {
    return errPublicKeySignatureMismatch
```

```
return nil
return fmt.Errorf("exportTx transactions disabled")
  Asset: avax.Asset{ID: out.AssetID()},
                      utxoBytes, err := Codec.Marshal(codecVersion, utxo)
if err != nil {
        return err
}
                      }
utxoID := utxo.InputID()
elem := &atomic.Element{
                                 Key: utxoID[:],
Value: utxoBytes,
                      if out, ok := utxo.Out.(avax.Addressable); ok {
    elem.Traits = out.Addresses()
                      }
                      elems[i] = elem
           return ctx.SharedMemory.Apply(map[ids.ID]*atomic.Requests{tx.DestinationChain: {PutRequests: elems}}, batch) return fmt.Errorf("exportTx transactions disabled")
// newExportTx returns a new ExportTx

@0 -248,122 +80,10 @0 func (vm *VM) newExportTx(
baseFee *big.lnt, // fee to use post-AP3
keys []*crypto.PrivateKeySECP256KlR, // Pay the fee and provide the tokens
    keys [] c ] ret
(*Tx, error) {
    if vm.ctx.XChainID != chainID {
        return nil, errWrongChainID
           },
           }}
                      // consume non-AVAX
if assetID != vm.ctx.AVAXAssetID {
    ins, signers, err = vm.GetSpendableFunds(keys, assetID, amount)
    if err != nil {
        return nil, fmt.Errorf("couldn't generate tx inputs/signers: %w", err)
}
           }
} else {
                      ι
avaxNeeded = amount
           rules := vm.currentRules()
switch {
case rules.IsApricotPhase3:
                      Ins: ins,
ExportedOutputs: outs,
                      }
tx := &Tx{UnsignedAtomicTx: utx}
if err := tx.Sign(vm.codec, nil); err != nil {
    return nil, err
                      var cost uint64
cost, err = tx.GasUsed()
if err != nil {
    return nil, err
                      avaxIns,\ avaxSigners,\ err = vm.GetSpendableAVAXWithFee(keys,\ avaxNeeded,\ cost,\ baseFee)
                      var newAvaxNeeded uint64 newAvaxNeeded, err = math.Add64(avaxNeeded, params.AvalancheAtomicTxFee) if err != nil {
           default:
                                 return nil, err0verflowExport
                       avaxIns, avaxSigners, err = vm.GetSpendableFunds(keys, vm.ctx.AVAXAssetID, newAvaxNeeded)
           }
if err != nil {
    return nil, fmt.Errorf("couldn't generate tx inputs/signers: %w", err)
           ins = append(ins, avaxIns...)
signers = append(signers, avaxSigners...)
           avax.SortTransferableOutputs(outs, vm.codec)
SortEVMInputsAndSigners(ins, signers)
            // Create the transaction
utx := &UnsignedExportTx{
    NetworkID:
                      NetworkID: vm.ctx.NetworkID,
BlockchainID: vm.ctx.ChainID,
DestinationChain: chainID,
                      Ins: ins,
ExportedOutputs: outs,
           }
tx := &Tx{UnsignedAtomicTx: utx}
if err := tx.Sign(vm.codec, signers); err != nil {
    return nil, err
           return tx, utx.Verify(vm.ctx.XChainID, vm.ctx, vm.currentRules())
return nil, errWrongChainID
```

```
state.SubBalance(from.Address, amount)
                                                       { log.Debug("crosschain C->X", "addr", from.Address, "amount", from.Amount, "assetID", from.AssetID) amount := new(big.Int).SetUint64(from.Amount) if state.GetBalanceMultiCoin(from.Address, common.Hash(from.AssetID)).Cmp(amount) < 0 {
                                                                          return\ errInsufficientFunds
                                                       state.SubBalanceMultiCoin(from.Address, common.Hash(from.AssetID), amount)
                                     if state.GetNonce(from.Address) != from.Nonce {
    return errInvalidNonce
                                      addrs[from.Address] = from.Nonce
                   for addr, nonce := range addrs {
     state.SetNonce(addr, nonce+1)
                    return errInsufficientFunds
diff --git a/plugin/evm/export_tx_test.go b/plugin/evm/export_tx_test.go index 2861af0. .2a7b18 100644
--- a/plugin/evm/export_tx_test.go
+++ b/plugin/evm/export_tx_test.go
 @@ -8,15 +8,15 @@ import (
"math/big"
                    "testing
                  "github.com/ava-labs/avalanchego/chains/atomic"
"github.com/ava-labs/avalanchego/ids"
engCommon "github.com/ava-labs/avalanchego/snow/engine/common"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/components/avax"
"github.com/ava-labs/avalanchego/vms/cep256klfx"
"github.com/ava-labs/avalanchego/vms/sep256klfx"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/avalanchego/utils/crypto"
                  "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/flare/chains/atomic"
"github.com/flare-foundation/flare/ids"
engCommon "github.com/flare-foundation/flare/snow/engine/com
"github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/units"
"github.com/flare-foundation/flare/wms/components/avax"
"github.com/flare-foundation/flare/wms/secp256klfx"
// createExportTxOptions adds funds to shared memory, imports them, and returns a list of export transactions diff --git a/plugin/evm/factory.go b/plugin/evm/factory.go index 34ecc89. .79388fc 100644 --- a/plugin/evm/factory.go +++ b/plugin/evm/factory.go
 @ -4,9 +4,9 @@
   package evm
                    (
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/snow
"github.com/ava-labs/avalanchego/vms"
                    "github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/snow
"github.com/flare-foundation/flare/vms"
 diff --git a/plugin/evm/formatting.go b/plugin/evm/formatting.go
index d2194ea..cf6c668 100644
--- a/plugin/evm/formatting.go
 +++ b/plugin/evm/formatting.go
  -6,12 +6,12 @@ package evm
                    github.com/ava-labs/avalanchego/ids"
                    github.com/ava-labs/avalanchego/utils/constants"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/formatting'
                   "github.com/ethereum/go-ethereum/common"
ethcrypto "github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/flare/ids"
                     "github.com/flare-foundation/flare/utils/constants
                     "github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/formatting"
// ParseLocalAddress takes in an address for this chain and produces the ID diff --git a/plugin/evm/gasprice_update.go b/plugin/evm/gasprice_update.go index 7la4eal..177be08 100644
--- a/plugin/evm/gasprice_update.go
+++ b/plugin/evm/gasprice_update.go
--- a/plugin/evm/gasprice_update.go
 @ -8,7
                   +8,7 @@ import (
"sync"
                    "time'
                    "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params"
 type gasPriceUpdater struct {
 type gasriceopulater struct {
diff --git a/plugin/ewm/gasprice_update_test.go b/plugin/evm/gasprice_update_test.go
index 24d8337.5a720fb 100644
--- a/plugin/evm/gasprice_update_test.go
+++ b/plugin/evm/gasprice_update_test.go
                  +9,7 @@ import (
"testing"
 @ -9,7
                    "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params"
type mockGasPriceSetter struct {
diff --git a/plugin/evm/import_tx.go b/plugin/evm/import_tx.go
index 6ae6352.acf5a34 100644
--- a/plugin/evm/import_tx.go
+++ b/plugin/evm/import_tx.go
@@ -7.19 +7.15 @@ import (
"fmt"
"matb/bia"
                    "math/big
                   "github.com/ava-labs/coreth/core/state"
```

```
"github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/params"
                 github.com/ava-labs/avalanchego/chains/atomic
                 "github.com/ava-labs/avalanchego/database
                "github.com/ava-labs/avalanchego/database"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/snow"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/math"
"github.com/ava-labs/avalanchego/wms/components/avax"
                  github.com/ava-labs/avalanchego/vms/secp256k1fx
                "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/flare/database
                 github.com/flare-foundation/flare/ids
                 github.com/flare-foundation/flare/snow
                 github.com/flare-foundation/flare/utils/crypto"
                 github.com/flare-foundation/flare/vms/compo
// UnsignedImportTx is an unsigned ImportTx
@@ -39,11 +35,7 @@ type UnsignedImportTx struct {
  // InputUTXOs returns the UTXOIDs of the imported funds
func (tx *UnsignedImportTx) InputUTXOs() ids.Set {
      set := ids.NewSet(len(tx.ImportedInputs))
                for _, in := range tx.ImportedInputs {
                               set.Add(in.InputID())
               return set
return ids.Set{}
  // Verify this transaction is well-formed
@ -52,89 +44,16 @@ func (tx *UnsignedImportTx) Verify(
    ctx *snow.Context,
                rules params.Rules,
     error {
              case len(tx.ImportedInputs) == 0:
    return errNoImportInputs
case tx.NetworkID != ctx.NetworkID:
    return errWrongNetworkID
case ctx.ChainID != tx.BlockchainID:
    return errWrongBlockchainID
case rules.ISApricotPhase3 && len(tx.Outs) == 0:
    return errNoEVMOutputs
}
                for _, out := range tx.Outs {
    if err := out.Verify(); err != nil {
        return fmt.Errorf("EVM Output failed verification: %w", err)
    .
                for _, in := range tx.ImportedInputs {
    if err := in.Verify(); err != nil {
        return fmt.Errorf("atomic input failed verification: %w", err)
               if !avax.IsSortedAndUniqueTransferableInputs(tx.ImportedInputs) {
                                return errInputsNotSortedUnique
               if rules.IsApricotPhase2 {
    if !IsSortedAndUniqueEVMOutputs(tx.Outs) {
        return errOutputsNotSortedUnique
               } else if rules.IsApricotPhasel {
    if !IsSortedEVMOutputs(tx.Outs) {
        return errOutputsNotSorted
                               }
                return nil
return errWrongChainID
  func (tx *UnsignedImportTx) GasUsed() (uint64, error) {
    cost := calcBytesCost(len(tx.UnsignedBytes()))
    for _, in := range tx.ImportedInputs {
        inCost, err := in.In.Cost()
        if err != nil {
                                             return 0, err
                               cost, err = math.Add64(cost, inCost)
if err != nil {
    return θ, err
                               3
                 return cost. nil
                return 0, fmt.Errorf("exportTx transactions disabled")
  // Amount of [assetID] burned by this transaction
func (tx *UnsignedImportTx) Burned(assetID ids.ID) (uint64, error) {
    var (
                               input uint64
err error
                )
for _, out := range tx.Outs {
    if out.AssetID == assetID {
        spent, err = math.Add64(spent, out.Amount)
        if err != nil {
            return 0, err
        }
}
                               }
                       -, in := range tx.ImportedInputs {
   if in.AssetIO() == assetID {
        input, err = math.Add64(input, in.Input().Amount())
        if err != nil {
            return 0, err
        }
}
                               }
                return math.Sub64(input, spent) return \theta, fmt.Errorf("exportTx transactions disabled")
  // SemanticVerify this transaction is valid.
@ -145,82 +64,7 @@ func (tx *UnsignedImportTx) SemanticVerify(
    baseFee *big.Int,
    rules params.Rules,
  ) error {
               if err := tx.Verify(vm.ctx.XChainID, vm.ctx, rules); err != nil {
    return err
```

```
// Check the transaction consumes and produces the right amounts
fc := avax.NewFlowChecker()
switch {
              // Apply dynamic fees to import transactions as of Apricot Phase 3
              case rules.IsApricotPhase3:
    gasUsed, err := stx.GasUsed()
    if err != nil {
        return err
                          fc.Produce(vm.ctx.AVAXAssetID, txFee)
              // Apply fees to import transactions as of Apricot Phase 2
             case rules.IsApricotPhase2:
     fc.Produce(vm.ctx.AVAXAssetID, params.AvalancheAtomicTxFee)
             for _, in := range tx.ImportedInputs {
    fc.Consume(in.AssetID(), in.Input().Amount())
             if err := fc.Verify(); err != nil {
     return fmt.Errorf("import tx flow check failed due to: %w", err)
             if len(stx.Creds) != len(tx.ImportedInputs) {
    return fmt.Errorf("import tx contained mismatched number of inputs/credentials (%d vs. %d)", len(tx.ImportedInputs), len(stx.Creds))
             if !vm.ctx.IsBootstrapped() {
      // Allow for force committing during bootstrapping
                           return nil
             utxoIDs := make([][]byte, len(tx.ImportedInputs))
for i, in := range tx.ImportedInputs {
    inputID := in.UTXOID.InputID()
    utxoIDs[i] = inputID[:]
             // allUTXOBytes is guaranteed to be the same length as utxoIDs
allUTXOBytes, err := vm.ctx.SharedMemory.Get(tx.SourceChain, utxoIDs)
if err != nil {
    return fmt.Errorf("failed to fetch import UTXOs from %s due to: %w", tx.SourceChain, err)
              for i, in := range tx.ImportedInputs {
    utxoBytes := allUTXOBytes[i]
                          utxo := &avax.UTXO{}
if _, err := vm.codec.Unmarshal(utxoBytes, utxo); err != nil {
    return fmt.Errorf("failed to unmarshal UTXO: %w", err)
}
                          cred := stx.Creds[i]
                          utxoAssetID := utxo.AssetID()
inAssetID := in.AssetID()
if utxoAssetID != inAssetID {
    return errAssetIDMismatch
                         }
                         if err := vm.fx.VerifyTransfer(tx, in.In, cred, utxo.Out); err != nil {
    return fmt.Errorf("import tx transfer failed verification: %w", err)
              return vm.conflicts(tx.InputUTXOs(), parent)
return fmt.Errorf("exportTx transactions disabled")
  // Accept this transaction and spend imported inputs
// Accept this transaction and spein amported inputs
@@ -229,12 +73,7 @@ func (tx "UnsignedImportTx) SemanticVerify(
// only to have the transaction not be Accepted. This would be inconsistent.
// Recall that imported UTXOs are not kept in a versionBB.
func (tx *UnsignedImportTx) Accept(ctx *snow.Context, batch database.Batch) error {
             utxoIDs := make([][]byte, len(tx.ImportedInputs))
for i, in := range tx.ImportedInputs {
    inputID := in.InputID()
    utxoIDs[i] = inputID[:]
             return ctx.SharedMemory.Apply(map[ids.ID]*atomic.Requests{tx.SourceChain: {RemoveRequests: utxoIDs}}, batch) return fmt.Errorf("exportTx transactions disabled")
// newImportTx returns a new ImportTx
@0 -244,160 +83,11 @0 func (vm *VM) newImportTx(
    baseFee *big.Int, // fee to use post-AP3
    keys []*crypto.PrivateKeySECP256KIR, // Keys to import the funds
) (*Tx, error) {
    if vm.ctx.XchainID != chainID {
        return nil, errWrongChainID
    }
}
             }
             atomicUTXOs, \_, \_, err := vm.GetAtomicUTXOs(chainID, kc.Addresses(), ids.ShortEmpty, ids.Empty, -1) \\ if err != nil \{
                          return nil, fmt.Errorf("problem retrieving atomic UTXOs: %w", err)
              importedInputs := []*avax.TransferableInput{}
             signers := [][]*crypto.PrivateKeySECP256K1R{}
             importedAmount := make(map[ids.ID]uint64)
now := vm.clock.Unix()
              aid := utxo.AssetID()
importedAmount[aid], err = math.Add64(importedAmount[aid], input.Amount())
if err != nil {
    ...
}
                                       return nil, err
                           importedInputs = append(importedInputs, &avax.TransferableInput{
    UTXOID: utxo.UTXOID,
                                       Asset: utxo.Asset,
In: input,
                          })
```

```
signers = append(signers, utxoSigners)
             avax.SortTransferableInputsWithSigners(importedInputs, signers)
importedAVAXAmount := importedAmount[vm.ctx.AVAXAssetID]
            outs := make([lEVMOutput, 0, len(importedAmount))
            // the fee if assetID == vm.ctx.AVAXAssetID || amount == \theta {
                                    continue
                         outs = append(outs, EVMOutput{
                                    Address: to,
                                    Amount: amount,
AssetID: assetID,
            rules := vm.currentRules()
                        txFeeWithoutChange uint64
txFeeWithChange uint64
             switch {
             case rules.IsApricotPhase3:
                        if baseFee == nil {
    return nil, errNilBaseFeeApricotPhase3
                         utx := &UnsignedImportTx{
                                    NetworkID: vm.ctx.NetworkID,
BlockchainID: vm.ctx.ChainID,
Outs: outs,
ImportedInputs: importedInputs,
                                                            chainID,
                                    SourceChain:
                        /
tx := &Tx{UnsignedAtomicTx: utx}
if err := tx.Sign(vm.codec, nil); err != nil {
    return nil, err
                         qasUsedWithoutChange, err := tx.GasUsed()
                        if err != nil {
    return nil, err
                        gasUsedWithChange := gasUsedWithoutChange + EVMOutputGas
                         txFeeWithoutChange, err = calculateDynamicFee(gasUsedWithoutChange, baseFee)
                        if err != nil {
    return nil, err
                         txFeeWithChange, err = calculateDynamicFee(gasUsedWithChange, baseFee)
                        if err != nil {
    return nil, err
            case rules.IsApricotPhase2:
txFeeWithoutChange = params.AvalancheAtomicTxFee
txFeeWithChange = params.AvalancheAtomicTxFee
             // AVAX output
if importedAVAXAmount < txFeeWithoutChange { // imported amount goes toward paying tx fee
    return nil, errInsufficientFundsForFee</pre>
            if importedAVAXAmount > txFeeWithChange {
    outs = append(outs, EVMOutput{
         Address: to,
         Amount: importedAVAXAmount - txFeeWithChange,
                                    AssetID: vm.ctx.AVAXAssetID,
            // If no outputs are produced, return an error.
            // Note: this can happen if there is exactly enough AVAX to pay the 
// transaction fee, but no other funds to be imported. 
if len(outs) == 0 { return nil, errNoEVMOutputs
            SortEVMOutputs(outs)
            utx := &UnsignedImportTx{
                        if err := &Tx{UnsignedAtomicTx: utx}
if err := tx.Sign(vm.codec, signers); err != nil {
    return nil, err
            return tx, utx.Verify(vm.ctx.XChainID, vm.ctx, vm.currentRules())
return nil, errWrongChainID
  // EVMStateTransfer performs the state transfer to increase the balances of
// accounts accordingly with the imported EVMOutputs
func (tx *UnsignedImportTx) EVMStateTransfer(ctx *snow.Context, state *state.StateDB) error {
            log.Debug("crosschain X->C", "addr", to.Address, "amount", to.Amount, "assetID", to.AssetID)
amount := new(big.Int).SetUint64(to.Amount)
state.AddBalanceMultiCoin(to.Address, common.Hash(to.AssetID), amount)
             return nil
return errInsufficientFunds
}
diff --git a/plugin/evm/import_tx_test.go b/plugin/evm/import_tx_test.go
index b3604e1. 4545213 100644
--- a/plugin/evm/import_tx_test.go
+++ b/plugin/evm/import_tx_test.go
@@ -7,14 +7,14 @@ import (
"math/big"
"testion"
"testion"
             "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/params
             "github.com/ava-labs/avalanchego/chains/atomic
```

```
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/wms/secp256k1fx'
"github.com/ava-labs/avalanchego/wms/secp256k1fx'
"github.com/flare-foundation/flare/chains/atomic"
                          "github.com/flare-foundation/flare/ids"
                         "github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/wms/components/"
"github.com/flare-foundation/flare/wms/secp256klfx
// createImportTxOptions adds a UTXO to shared memory and generates a list of import transactions sending this UTXO diff --git a/plugin/evm/mempool.go b/plugin/evm/mempool.go index 5385881..6b7ab75 100644
--- a/plugin/evm/mempool.go
+++ b/plugin/evm/mempool.go
@@ -8,9 +8,9 @@ import (
"fmt"
                       "sync"
                         "github.com/ava-labs/avalanchego/cache
                           'github.com/ava-labs/avalanchego/ids
                         "github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/flare/cache"
"github.com/flare-foundation/flare/ids"
    const
const (
diff --git a/plugin/evm/mempool_atomic_gossiping_test.go b/plugin/evm/mempool_atomic_gossiping_test.go
index 43c0f9b..1441852 100644
--- a/plugin/evm/mempool_atomic_gossiping_test.go
+++ b/plugin/evm/mempool_atomic_gossiping_test.go
@0 -6,13 +6,13 @0 package evm
   3@ -6,⊥5
import (
"testing"
                         "github.com/ava-labs/coreth/params"
"github.com/flare-foundation/coreth/params'
                         "github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/vms/components/avax"
"github.com/ava-labs/avalanchego/vms/components/chain"
"github.com/ava-labs/avalanchego/vms/secp256klfx"
"github.com/flare-foundation/flare/ids"
                         "github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/ums/components/avax"
"github.com/flare-foundation/flare/wms/components/chain"
"github.com/flare-foundation/flare/wms/secp256k1fx"
                         "github.com/stretchr/testify/assert"
diff --git a/plugin/evm/message/codec.go b/plugin/evm/message/codec.go index 8c17274..92fd256 100644
 --- a/plugin/evm/message/codec.go
+++ b/plugin/evm/message/codec.go
@@ -4,11 +4,11 @@
   package message
                          github.com/ava-labs/avalanchego/codec
                         "github.com/ava-labs/avalanchego/codec/linearcodec"
"github.com/ava-labs/avalanchego/codec/reflectcodec"
"github.com/ava-labs/avalanchego/tils/units"
"github.com/ava-labs/avalanchego/utils/units"
"github.com/flare-foundation/flare/codec"
                         guinub.com/Tlare-toundation/flare/codec"
"github.com/flare-foundation/flare/codec/linearcodec"
"github.com/flare-foundation/flare/codec/reflectcodec"
"github.com/flare-foundation/flare/utils/units"
"github.com/flare-foundation/flare/utils/wrappers"
Cuist (
diff --git a/plugin/evm/message/handler.go b/plugin/evm/message/handler.go
index bc88320.9ca264f 100644
--- a/plugin/evm/message/handler.go
+++ b/plugin/evm/message/handler.go
@@ -6,7 +6,7 @@ package message
   import (
"github.com/ethereum/go-ethereum/log"
                          github.com/ava-labs/avalanchego/ids"
                          "github.com/flare-foundation/flare/ids"
var _ Handler = NoopHandler{}
diff --git a/plugin/evm/message/handler_test.go b/plugin/evm/message/handler_test.go
index 179ac56.es3560b 106644
--- a/plugin/evm/message/handler_test.go
+++ b/plugin/evm/message/handler_test.go
@@ -6,7 +6,7 @@ package message
import (
i
   import (
"testing"
                          "github.com/ava-labs/avalanchego/ids'
                         "github.com/flare-foundation/flare/ids"
                         "github.com/stretchr/testify/assert
diff --git a/plugin/evm/message/message.go b/plugin/evm/message/message.go
index 082adbe..a9ab2fe 100644
--- a/plugin/evm/message/message.go
  +++ b/plugin/evm/message/message.go
@@ -8,8 +8,8 @@ import (
                         "github.com/ethereum/go-ethereum/common
                         "github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/utils/units"
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/utils/units"
\label{limits} \begin{array}{lll} \mbox{diff --git a/plugin/evm/message/message\_test.go b/plugin/evm/message/message\_test.go index 5575e25..b0fe13a 100644 \end{array}
"github.com/ava-labs/avalanchego/utils"
                          github.com/ava-labs/avalanchego/utils/units"
"github.com/ava-labs/avalanchego/utils/units"
"github.com/flare-foundation/flare/utils"
"github.com/flare-foundation/flare/utils/units'
                         "github.com/stretchr/testify/assert"
diff --git a/plugin/evm/network.go b/plugin/evm/network.go index e3690d6..5d49e7a 100644
--- a/plugin/evm/network.go
+++ b/plugin/evm/network.go
@@ -9,23 +9,23 @@ import (
```

```
"sync'
"time'
                     github.com/ava-labs/avalanchego/cache
                     "github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/snow
                    github.com/ava-labs/avalanchego/utils/wrappers"
"github.com/ava-labs/avalanchego/utils/wrappers"
"github.com/flare-foundation/flare/cache"
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/snow"
                    "github.com/flare-foundation/flare/utils/wrappers
                   commonEng "github.com/ava-labs/avalanchego/snow/engine/common"
commonEng "github.com/flare-foundation/flare/snow/engine/common"
                    "github.com/ethereum/go-ethereum/common
                     aithub.com/ethereum/ao-ethereum/loa"
                    "github.com/ethereum/go-ethereum/rlp'
                   "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state'
"github.com/ava-labs/coreth/core/types'
                   "github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/plugin/evm/message"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/plugin/evm/message'
                   coreth "github.com/ava-labs/coreth/chain"
coreth "github.com/flare-foundation/coreth/chain"
   const
diff --git a/plugin/evm/network_atomic_gossiping_test.go b/plugin/evm/network_atomic_gossiping_test.go index 501bc5c..c8a8c6d 100644
--- a/plugin/evm/network_atomic_gossiping_test.go
+++ b/plugin/evm/network_atomic_gossiping_test.go
@ -8,11
                   . +8,11 @@ import (
"testing"
                   "time
                   "github.com/ava-labs/avalanchego/ids"
"github.com/flare-foundation/flare/ids"
                   "github.com/stretchr/testify/assert"
                   "github.com/ava-labs/coreth/plugin/evm/message"
"github.com/flare-foundation/coreth/plugin/evm/message"
// locally issued txs should be gossiped diff --git a/plugin/ewm/network_eth_gossiping_test.go b/plugin/evm/network_eth_gossiping_test.go index 54a2011.b041842 100644 --- a/plugin/evm/network_eth_gossiping_test.go
+++ b/plugin/evm/network_eth_gossiping_test.go
@@ -12,7 +12,7 @@ import (
    "testing"
                     github.com/ava-labs/avalanchego/ids"
                    "github.com/flare-foundation/flare/ids'
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
@@ -20,10 +20,10 @@ import (
                   "github.com/stretchr/testify/assert"
                   "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/plugin/evm/message
                   "github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
func fundAddressByGenesis(addrs []common.Address) (string, error) {
diff --git a/plugin/evm/service.go b/plugin/evm/service.go
index 0dcc733..f15774f 100644
--- a/plugin/evm/service.go
"github.com/ava-labs/avalanchego/api"
                   "github.com/ava-labs/avalanchego/api"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/utils/constants"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/formatting"
                      github.com/ava-labs/coreth/params'
                  "github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
ethcrypto "github.com/ethereum/go-ethereum/common/hexutil"
github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/flare/api"
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/utils/constants"
"github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/commatting"
"github.com/flare-foundation/flare/utils/formatting"
"github.com/flare-foundation/flare/utils/json"
// test constants
diff --git a/plugin/evm/static_service.go b/plugin/evm/static_service.go
index 9c5925.eldb747 100644
--- a/plugin/evm/static_service.go
+++ b/plugin/evm/static_service.go
@@ -7,8 +7,8 @@ import (
"context"
                   "encoding/json
                   "github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/coreth/core"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/flare/utils/formatting"
// StaticService defines the static API services exposed by the evm diff --git a/plugin/evm/tx.go b/plugin/evm/tx.go index 3f0ad92.0lbd7c4 100644 --- a/plugin/evm/tx.go
+++ b/plugin/evm/tx.go
                      +12,19 @@ import (
                   "github.com/ethereum/go-ethereum/common"
                    "github.com/ava-labs/coreth/core/state
                    "github.com/ava-labs/coreth/params"
```

```
"github.com/ava-labs/avalanchego/codec"
"github.com/ava-labs/avalanchego/database"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/snow"
"github.com/ava-labs/avalanchego/utils"
"github.com/ava-labs/avalanchego/utils/crypto"
                       "github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/hashing"
"github.com/ava-labs/avalanchego/utils/wrappers"
"github.com/ava-labs/avalanchego/wms/components/
"github.com/ava-labs/avalanchego/wms/secp256k"
"github.com/flare-foundation/coreth/core/state"
                        "github.com/flare-foundation/coreth/params
                       "github.com/flare-foundation/flare/codec"
"github.com/flare-foundation/flare/database"
"github.com/flare-foundation/flare/ids"
                         github.com/flare-foundation/flare/snow
                       "github.com/flare-foundation/flare/snow"
"github.com/flare-foundation/flare/utils"
"github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/hashing"
"github.com/flare-foundation/flare/utils/wrappers"
"github.com/flare-foundation/flare/utils/wrappers"
                         github.com/flare-foundation/flare/vms/secp256k1fx
var (
diff --git a/plugin/evm/tx_heap.go b/plugin/evm/tx_heap.go
index 11c1319..2d79d0f 100644
--- a/plugin/evm/tx_heap.go
+++ b/plugin/evm/tx_heap.go
@@ -3,7 +3,7 @@ package evm
import (
                         container/heap
                       "github.com/ava-labs/avalanchego/ids"
"github.com/flare-foundation/flare/ids"
    // txEntry is used to track the [gasPrice] transactions pay to be included in
diff --git a/plugin/evm/tx_test.go b/plugin/evm/tx_test.go index e0482e2..c0b0984 100644
--- a/plugin/evm/tx_test.go
 +++ b/plugin/evm/tx_test.go
@@ -8,9 +8,9 @@ import (
"strings"
                       "testing"
                        "github.com/ava-labs/avalanchego/chains/atomic"
                       github.com/ava-labs/avalanchego/snow"

"github.com/ava-labs/coreth/params"

"github.com/flare-foundation/coreth/params"

"github.com/flare-foundation/flare/chains/atomic"

"github.com/flare-foundation/flare/snow"
func TestCalculateDynamicFee(t *testing.T) {
diff --git a/plugin/evm/user.go b/plugin/evm/user.go
index e190259..fealbe4 190664
--- a/plugin/evm/user.go
+++ b/plugin/evm/user.go
"github.com/ava-labs/avalanchego/database/encdb"
"github.com/ava-labs/avalanchego/ids"
                          github.com/ava-labs/avalanchego/utils/crypto"
                       "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/flare/database/encdb"
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/ids"
// Key in the database whose corresponding value is the list of diff --git a/plugin/evm/vm.go b/plugin/evm/vm.go index 66b98eb..d5a130a 100644 --- a/plugin/evm/vm.go
+++ b/plugin/evm/vm.go
@@ -16,49 +16,49 @@ import (
    "sync"
    "time"
                        "github.com/ava-labs/avalanchego/database/versiondb
                       "github.com/ava-labs/coreth/caine"
"github.com/ava-labs/coreth/caine"
"github.com/ava-labs/coreth/cone"
"github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/types"
                         "github.com/ava-labs/coreth/eth/ethconfig'
"github.com/ava-labs/coreth/node"
                          github.com/ava-labs/coreth/para
                         github.com/ava-labs/coreth/rpc"
                       coreth "github.com/flare-foundation/coreth/chain'
                       coreth "github.com/flare-foundation/coreth/chain"
"github.com/flare-foundation/coreth/coresus/dummy"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/types"
"github.com/flare-foundation/coreth/ch/ch/ctypes"
                        github.com/flare-foundation/coreth/node"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/flare/database/versiondb"
                        "qithub.com/ethereum/go-ethereum/commor
                        github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/rpc"
                       avalancheRPC "github.com/gorilla/rpc/v2
                       "github.com/ava-labs/avalanchego/cache"
"github.com/ava-labs/avalanchego/codec"
"github.com/ava-labs/avalanchego/codec/linearcodec"
"github.com/ava-labs/avalanchego/database"
"github.com/ava-labs/avalanchego/database/prefixdb"
"github.com/ava-labs/avalanchego/database/prefixdb"
"github.com/ava-labs/avalanchego/ids"
"github.com/ava-labs/avalanchego/inow"
"github.com/ava-labs/avalanchego/snow/choices"
"github.com/ava-labs/avalanchego/snow/choices"
"github.com/ava-labs/avalanchego/snow/consensus/snowman"
"github.com/ava-labs/avalanchego/yitls/constants"
"github.com/ava-labs/avalanchego/utils/crypto"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/forfiler"
                       "qithub.com/ava-labs/avalancheqo/cache
                        github.com/ava-labs/avalanchego/utits/profiler"
"github.com/ava-labs/avalanchego/utits/profiler"
"github.com/ava-labs/avalanchego/utits/yrappers"
"github.com/ava-labs/avalanchego/utits/wrappers"
"github.com/ava-labs/avalanchego/wms/components/avax"
"github.com/ava-labs/avalanchego/vms/components/chain"
"github.com/ava-labs/avalanchego/vms/secp256klfx"
                       commonEng "github.com/ava-labs/avalanchego/snow/engine/common
```

```
avalancheJSON "github.com/ava-labs/avalanchego/utils/json"
"github.com/flare-foundation/flare/cache"
"github.com/flare-foundation/flare/codec"
"github.com/flare-foundation/flare/codec/linearcodec"
"github.com/flare-foundation/flare/database"
                        "github.com/flare-foundation/flare/database"
"github.com/flare-foundation/flare/database/manager"
"github.com/flare-foundation/flare/database/prefixdb"
"github.com/flare-foundation/flare/ids"
"github.com/flare-foundation/flare/snow/
"github.com/flare-foundation/flare/snow/choices"
                      "github.com/flare-foundation/flare/snow/choices"
"github.com/flare-foundation/flare/snow/consensus/snowman
github.com/flare-foundation/flare/snow/engine/snowman/blu
github.com/flare-foundation/flare/utils/constants"
"github.com/flare-foundation/flare/utils/crypto"
"github.com/flare-foundation/flare/utils/formatting"
"github.com/flare-foundation/flare/utils/formatting"
"github.com/flare-foundation/flare/utils/math"
"github.com/flare-foundation/flare/utils/math"
"github.com/flare-foundation/flare/utils/mitmer/mckable"
"github.com/flare-foundation/flare/utils/wrappers"
"github.com/flare-foundation/flare/wms/components/chain"
"github.com/flare-foundation/flare/wms/components/chain"
"github.com/flare-foundation/flare/wms/components/chain"
"github.com/flare-foundation/flare/wms/secp256klfx"
                                                                                                                                                                         wman/block"
                        commonEng "github.com/flare-foundation/flare/snow/engine/common
                        avalancheJSON "github.com/flare-foundation/flare/utils/ison"
const (
diff --git a/plugin/evm/vm_test.go b/plugin/evm/vm_test.go
index 2050e18..006b1cc 100644
--- a/plugin/evm/vm_test.go
+++ b/plugin/evm/vm_test.go
@@ -16,39 +16,39 @@ import
"testing"
"time"
                         "github com/ava-labs/coreth/trie"
                        "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/trie"
                        "github.com/stretchr/testify/assert
                      "github.com/ava-labs/avalanchego/api/keystore"
"github.com/ava-labs/avalanchego/chains/atomic"
"github.com/ava-labs/avalanchego/database/manager"
"github.com/ava-labs/avalanchego/database/manager"
"github.com/ava-labs/avalanchego/database/prefixdb"
"github.com/ava-labs/avalanchego/snow/hoices"
"github.com/ava-labs/avalanchego/snow/choices"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/formatting"
"github.com/ava-labs/avalanchego/utils/logging"
"github.com/ava-labs/avalanchego/utils/logging"
"github.com/ava-labs/avalanchego/utils/mis-
"github.com/ava-labs/avalanchego/vers/components/avax"
"github.com/ava-labs/avalanchego/vers/components/chain
                         "github.com/ava-labs/avalanchego/vms/components/chain'
                         github.com/ava-labs/avalanchego/vms/secp256k1fx"
                        engCommon "github.com/ava-labs/avalanchego/snow/engine/common"
                         "github.com/ava-labs/coreth/consensus/dummy
                        github.com/ava-labs/coreth/comsensus/d
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/rpc"
                        accountKeystore "github.com/ava-labs/coreth/accounts/keystore"
"github.com/flare-foundation/flare/api/keystore"
"github.com/flare-foundation/flare/chains/atomic"
"github.com/flare-foundation/flare/database/manager"
"github.com/flare-foundation/flare/database/prefixdb"
                         "github.com/flare-foundation/flare/ids"
                         github.com/flare-foundation/flare/snow"
github.com/flare-foundation/flare/snow/choices"
"github.com/flare-foundation/flare/snow/crypto"
"github.com/flare-foundation/flare/utils/formatting"
                        "github.com/flare-foundation/flare/utils/formating"
"github.com/flare-foundation/flare/utils/logging"
"github.com/flare-foundation/flare/utils/units"
"github.com/flare-foundation/flare/utils/units"
"github.com/flare-foundation/flare/version"
"github.com/flare-foundation/flare/vms/components/avax"
"github.com/flare-foundation/flare/vms/components/chain"
                         "github.com/flare-foundation/flare/vms/secp256k1fx'
                         engCommon "github.com/flare-foundation/flare/snow/engine/common"
                         "github.com/flare-foundation/coreth/consensus/dummy
                         "github.com/flare-foundation/coreth/core
                         glithub.com/flare-foundation/coreth/core/types'
"github.com/flare-foundation/coreth/eth"
"github.com/flare-foundation/coreth/params"
"github.com/flare-foundation/coreth/params"
                       accountKeystore "github.com/flare-foundation/coreth/accounts/keystore"
var (
diff --git a/plugin/main.go b/plugin/main.go
index 96cd428..ced9384 100644
--- a/plugin/main.go
+++ b/plugin/main.go
@@ -9,9 +9,9 @@ import (
                        "qithub.com/hashicorp/qo-pluqin"
                        "github.com/ava-labs/avalanchego/vms/rpcchainvm"
"github.com/flare-foundation/flare/vms/rpcchainvm"
                        "github.com/ava-labs/coreth/plugin/evm"
"github.com/flare-foundation/coreth/plugin/evm'
func main() {
diff --git a/scripts/build.sh b/scripts/build.sh
index 98c1967..76d8ce8 100755
--- a/scripts/build.sh
+++ b/scripts/build.sh
@@ -4,7 +4,7 @@ set -0
set -o nounset
set -o pipefail
 -# Avalanche root directory
+# Coreth root directory
   ** Coreth root directory

CORETH_PATH=$( cd "$( dirname "${BASH_SOURCE[0]}" )"; cd .. && pwd )
   # Load the versions
@@ -27,4 +27,4 @@ coreth_commit=${CORETH_COMMIT:-$( git rev-list -1 HEAD )}
```

```
# Build Coreth, which is run as a subprocess
echo "Building Coreth Version: $coreth_version; GitCommit: $coreth_commit"
-go build -ldflags "-X github.com/ava-labs/coreth/plugin/evm.GitCommit=$coreth_commit -X github.com/ava-labs/coreth/plugin/evm.Version=$coreth_version" -o "$binary_path" "plugin/"*.go
+go build -ldflags "-X github.com/flare-foundation/coreth/plugin/evm.Version=$coreth_version" -o "$binary_path" "plugin/"*.go
diff --git a/scripts/build_image.sh b/scripts/build_image.sh
deleted file mode 100755
index 6de7673..0000000
--- a/scripts/build_image.sh
+++ /dev/null
@@ -1,20 +0,0 @@
-#!/usr/bin/env bash
   -set -o errexit
  -set -o nounset
-set -o pipefail
   -# Avalanche root directory
  -CORETH_PATH=$( cd "$( dirname "${BASH_SOURCE[0]}" )"; cd .. && pwd )
  -# Load the versions
-source "$CORETH_PATH"/scripts/versions.sh
  -# Load the constants
  -source "$CORETH PATH"/scripts/constants.sh
  - e-cho "Building Docker Image: $dockerhub_repo:$build_image_id based of $avalanche_version"
-docker build -t "$dockerhub_repo:$build_image_id" "$CORETH_PATH" -f "$CORETH_PATH/Dockerfile" \
- --build-arg ANALANCHE_VERSION="$avalanche_version" \
- --build-arg CORETH_COMMIT="$coreth_Commit" \
- --build-arg CORETH_COMMIT="$coreth_Commit" \
- --build-arg CORETH_BRANCH="$current_branch"
diff --git a/scripts/constants.sh b/scripts/constants.sh index 262f1a4.086dee9 100644
--- a/scripts/constants.sh
+++ b/scripts/constants.sh
@@ -4,20 +4,12 @@
GOPATH="$(go env GOPATH)"
    # Set binary location
  -binary path=${CORETH BINARY PATH:-"$GOPATH/src/github.com/ava-labs/avalanchego/build/plugins/evm"}
-
-# Avalabs docker hub
-dockerhub_repo="avaplatform/avalanchego"
+binary_path=${CORETH_BINARY_PATH:-"$GOPATH/src/github.com/flare-foundation/coreth/build/plugins/evm"}
   # Current branch
   current_branch=${CURRENT_BRANCH:-$(git describe --tags --exact-match 2> /dev/null || git symbolic-ref -q --short HEAD || git rev-parse --short HEAD)} echo "Using branch: ${current_branch}"
  -# Use an abbreviated version of the full commit to tag the image.
   # WARNING: this will use the most recent commit even if there are un-committed changes present coreth_commit="$(git --git-dir="$CORETH_PATH/.git" rev-parse HEAD)" coreth_commit_id="${coreth_commit_id="${coreth_commit::8}"
-build_image_id=${BUILD_IMAGE_ID:-"$avalanche_version-$coreth_commit_id"} diff --git a/scripts/versions.sh b/scripts/versions.sh index 6f2cc89. 48b1df6 100644 --- a/scripts/versions.sh +++ b/scripts/versions.sh
   #!/usr/bin/env bash
# Set up the versions to be used
-coreth_version=${CORETH_VERSION:-'v0.7.4'}
+coreth_version=${CORETH_VERSION:-'v0.1.5'}
**COTECT_VETSION=$\{\text{LINE}\text{LINE}\text{LINE}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text{VETSION}\text
 --- a/signer/core/apitypes/types.go
+++ b/signer/core/apitypes/types.go
@@ -32,9 +32,9 @@ import (
"math/big"
"strings"
                         "github.com/ava-labs/coreth/core/types"
                         "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/flare-foundation/coreth/core/types"
   type ValidationInfo struct {
diff --git a/tests/init.go b/tests/init.go index d08bca7..870la5b 100644
--- a/tests/init.go
+++ b/tests/init.go
@@ -31,7 +31,7 @@ import (
    "math/big"
                          github.com/ava-labs/coreth/params
                         "github.com/flare-foundation/coreth/params'
// Forks table defines supported forks and their chain config.
diff --git a/tests/init_test.go b/tests/init_test.go
index lddbfcc..5888be0 100644
--- a/tests/init_test.go
+++ b/tests/init_test.go
@@ -40,7 +40,7 @@ import
"strings"
"testing"
                         "github.com/ava-labs/coreth/params
                         "github.com/flare-foundation/coreth/params"
func readJSON(reader io.Reader, value interface{}) error {
diff --git a/tests/state_test_util.go b/tests/state_test_util.go
index 6e33efa..73ae6c1 100644
--- a/tests/state_test_util.go
+++ b/tests/state_test_util.go
@@ -34,17 +34,17 @@ import (
"strconv"
                         "strings"
                       "github.com/ava-labs/coreth/core"
"github.com/ava-labs/coreth/core/state"
"github.com/ava-labs/coreth/core/state/snapshot"
"github.com/ava-labs/coreth/core/types"
"github.com/ava-labs/coreth/erhdb"
"github.com/ava-labs/coreth/erhdb"
"github.com/ava-labs/coreth/params"
"github.com/ava-labs/coreth/params"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common"
                         "github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/hexutil"
"github.com/ethereum/go-ethereum/common/math"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/core"
"github.com/flare-foundation/coreth/core/state"
"github.com/flare-foundation/coreth/core/state/snapshot"
```

+ "github.com/flare-foundation/coreth/core/types" + "github.com/flare-foundation/coreth/core/vm"

```
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/params'
// StateTest checks transaction processing without block context.
diff --git a/trie/database.go b/trie/database.go
index 4f59c68..c5e59f4 100644
--- a/trie/database.go
+++ b/trie/database.go
@@ -36,12 +36,12 @@ import (
    "time"
                  "github.com/VictoriaMetrics/fastcache"
                   'github.com/ava-labs/coreth/cor
'github.com/ava-labs/coreth/eth
                  "github.com/ethereum/go-ethereum/common
                  github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/metrics"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
var (
diff --git a/trie/database_test.go b/trie/database_test.go
index bc3d3e9.626ddfe 100644
--- a/trie/database_test.go
 +++ b/trie/database_test.go
@@ -29,8 +29,8 @@ package t
   import (
"testing"
                  "qithub.com/ava-labs/coreth/ethdb/memorydb
                  "github.com/ethereum/go-ethereum/common"
"github.com/flare-foundation/coreth/ethdb/memorydb"
// Tests that the trie database returns a missing trie node error if attempting diff --git a/trie/iterator.go b/trie/iterator.go index 4ab8863..7863a00 190644 --- a/trie/iterator.go +++ b/trie/iterator.go |
 @@ -31,9 +31,9 @@ import (
"container/heap"
                  "errors"
                  "github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/memorydb'
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/ethdb"
                  "github.com/flare-foundation/coreth/ethdb/memorydb
func TestIterator(t *testing.T) {
diff --git a/trie/proof.go b/trie/proof.go
index 37ce9ed..5900e9e 100644
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/memorydb'
"github.com/ethereum/go-ethereum/common"
                  "github.com/ethereum/go-ethereum/log"
                  "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/ethdb"
                   github.com/flare-foundation/coreth/ethdb/memorydb"
// Prove constructs a merkle proof for key. The result contains all encoded nodes
diff --git a/trie/proof_test.go b/trie/proof_test.go
index f37c206..895babf 100644
--- a/trie/proof_test.go
++- b/trie/proof_test.go
@0 -35,9 +35,9 @0 import (
    "ttesting"
    "time"
                  "github.com/ava-labs/coreth/ethdb/memorydb
"github.com/ethereum/go-ethereum/common"
                  "github.com/ethereum/go-ethereum/crypto"
                  "github.com/flare-foundation/coreth/ethdb/memorydb"
 func init() {
diff --git a/trie/secure_trie.go b/trie/secure_trie.go
index 4f6a556..0d324e1 100644
index 47ba55b..Ud324E1 190b44
--- a/trie/secure_trie.go
+++ b/trie/secure_trie.go
@d -29,10 +29,10 @d package trie
import (
"fmt"
                  "mithub.com/ava-labs/coreth/core/types"
                  glthub.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
"github.com/ethereum/go-ethereum/log"
"github.com/flare-foundation/coreth/core/types'
 // SecureTrie wraps a trie with key hashing. In a secure trie, all
diff --git a/trie/secure_trie_test.go b/trie/secure_trie_test.go
index c9c29d7..642e7d2 100644
"github.com/ava-labs/coreth/ethdb/memorydb
                  github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/ethdb/memorydb"
   func newEmptySecure() *SecureTrie {
```

```
diff --git a/trie/stacktrie.go b/trie/stacktrie.go
index 248b4e4. 95fc7da 100644
--- a/trie/stacktrie.go
+++ b/trie/stacktrie.go
 @@ -35,10 +35,10 @@ import (
    "io"
                  "sync"
                  "github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common
                   "github.com/ethereum/go-ethereum/log'
                  "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/ethdb"
var ErrCommitDisabled = errors.New("no database for committing")
diff --git a/trie/stacktrie_test.go b/trie/stacktrie_test.go
index 189e9d4..b963d6b 100644
 --- a/trie/stacktrie_test.go
+++ b/trie/stacktrie_test.go
@@ -31,9 +31,9 @@ import (
"math/big"
                  "testing
                  "github.com/ava-labs/coreth/ethdb/memory
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
                   "github.com/flare-foundation/coreth/ethdb/memorydb"
 func TestSizeBug(t *testing.T) {
diff --git a/trie/sync.go b/trie/sync.go
index 85b1f5a..2469d9c 100644
"github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/common/prque"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
 // ErrNotRequested is returned by the trie sync when it's requested to process a
diff --git a/trie/sync_bloom.go b/trie/sync_bloom.go
index 51c318c..233f488 100644
"github.com/ava-labs/coreth/core/rawdb'
                   github.com/ava-labs/coreth/ethdb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/log"
                  "github.com/ethereum/go-ethereum/metrics"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
bloomfilter "github.com/holiman/bloomfilter/v2"
diff --git a/trie/sync_test.go b/trie/sync_test.go
index d3bbdbd..105a7c1 100644
--- a/trie/sync_test.go
+++ b/trie/sync_test.go
 @@ -30,9 +30,9 @@ import (
"bytes"
                  "testing"
                  "github.com/ava-labs/coreth/ethdb/memorydb"
"github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/flare-foundation/coreth/ethdb/memorydb"
// makeTestTrie create a sample test trie to test node-wise reconstruction.
diff --git a/trie/trie.go b/trie/trie.go
index ac68272..200d79e 100644
 --- a/trie/trie.go
 +++ b/trie/trie.go
@@ -33,11 +33,11 @@ import (
    "fmt"
    "sync"
                  "mithub com/ava-labs/coreth/core/types"
                  "github.com/ethereum/go-ethereum/common"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/log"
                   "github.com/ethereum/go-ethereum/rlp"
"github.com/flare-foundation/coreth/core/types'
@@ -38,13 +38,13 @@ import (
"testing"
                  "testing/quick'
                  "github.com/ava-labs/coreth/core/rawdb"
"github.com/ava-labs/coreth/ethdb"
"github.com/ava-labs/coreth/ethdb/memorydb"
                   "github.com/davecgh/go-spew/spew"
                  "github.com/davegh/go-spew/spew"
"github.com/ethereum/go-ethereum/crypto"
"github.com/ethereum/go-ethereum/rtpv"
"github.com/flare-foundation/coreth/core/rawdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
"github.com/flare-foundation/coreth/ethdb"
                   golang.org/x/crypto/sha3"
```