Policy Smart Contract
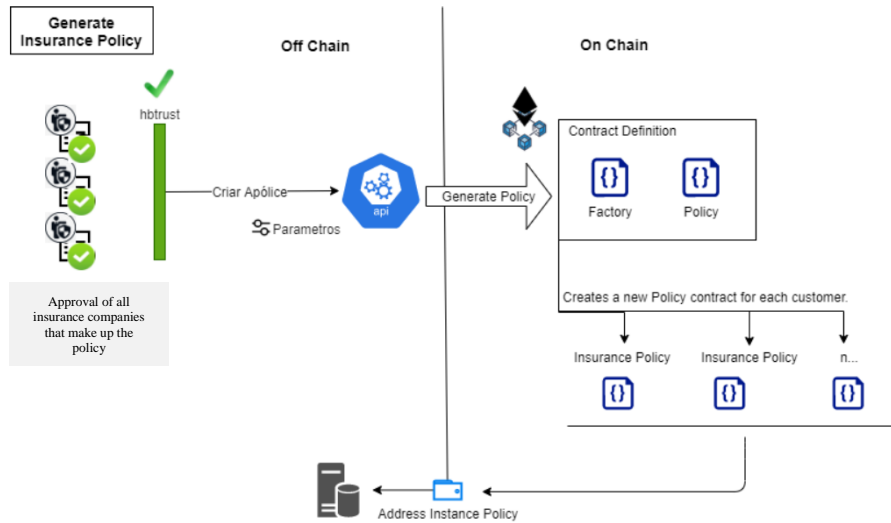
Register Policy

Smart Contract

Self destroy	Yes	only Owner
Pausable	Yes	only Admin
Factory	Yes	Generate Policies Instances

Roles and Functions

- *Admin role is allowed in the following roles:*
- Add Admin
  - Remove Admin
  - Pause / Unpause
  - add Insurance Company
  - remove Insurance Company

- *Insurance Company role* is allowed to use:
  - Generate Policy
  - All Consults Policy

Policy parameters

- All are required

```
{
      "privateKey":"7FDE0137C2E831A713A7415FB1256E7605EBFF04020345EB4E043B0C
95BF27BD",
      "insuranceCompany": {
      "wallets": ["0x71fC0e20F2DA5853CE9174A54093f5b2918cCfa2",
"0x17cA6A08758F4A078B9c53ca25E6F6736dF34094"]
      },
      "coverage": {
          "prizeAmount": "1000",
          "fipePercentage": "5",
          "app": "1",
          "glasses": 1,
          "rcfMaterials": "1",
          "rcfBodily": "1",
          "reserveCar": 1,
          "franchise": 1,
          "productCoverage": [
            "1", "2"
          ]
      },
      "policyInformation": {
          "proposal": "1",
          "apolice": "13334",
          "startValidity": 1586305780,
          "endValidity": 1617841780,
          "apoliceStatus": 1
      },
      "policyHoldedrData": {
          "nameComplete": "client",
          "dateOfBirth": 492308980,
          "maritalStatus": 1,
          "pocket": "1",
          "cnpjCpf": "11111111111",
          "gender": 1,
          "relationshipPolicyHolder": 1
      },
      "vehicleData": {
          "typeParam": 1,
          "marker": 1,
          "model": 1,
          "numerSlides": 5,
          "yearManufacture": 2000,
          "yearModel": 2001,
          "licensePlate": "11111",
          "chassis": "1111111111",
          "renavam": "1111111111",
          "fuel": 1,
          "newVehicle": 1,
          "vehicleFinaced": 1,
          "color": 3
      },
      "driverData": {
```

```
        "nameComplete": "client",
        "dateOfBirth":492308980 ,
        "maritalStatus": 1,
        "pocket": "1",
        "cpfCnpj": "111111111111",
        "gender": 1,
        "profession": 1,
        "cnh": "111111",
        "dateFirstCnh":955153780 ,
        "garage": 1,
        "usesWork": 1,
        "vehicleUse": 1
            }
}
```

Functions

Factory

- To generate a policy and make a consultation you need to be an insurance company

Function	Entry parameters	Description
Generate Policy	all of the above parameters,`onlyInsuranceCompany`	Creates the policy (Policy smart contract) and returns the transaction hash.
Consult Insurance Company Policies	Address insurance Company `onlyInsuranceCompany`	Consultation that returns all Policies related to an insurance company. Returns: `(address[] memory policyAddress, address[] memory ownerAddress)`

Policy

- To make an appointment or change the rank you need to be an insurance company

Update Status Policy	Address Policy smart contract New status = `status` `onlyInsuranceCompany`	Updates the status of a policy and returns the transaction hash.

Consult Policy Coverage	Address Policy smart contract `onlyInsuranceCompany`	Query that returns all parameters of a policy's Coverage. `(string memory prizeAmount,string memory fipePercentage,string memory app,uint32 glasses,string memory rcfMaterials,string memory rcfBodily,uint32 reserveCar,uint32 franchise,string[] memory productCoverage)`
Consult Driver	Address Policy smart contract `onlyInsuranceCompany`	Query that returns all Driver parameters of a policy. `(string memory nameComplete,uint64 dateOfBirth,uint32 maritalStatus,string memory pocket,string memory cpfCnpj,uint32 gender,uint64 profession,string memory cnh,uint256 dateFirstCnh,uint32 garage,uint32 usesWork,uint32 vehicleUse)`
Consult Policy Holder	Address Policy smart contract `onlyInsuranceCompany`	Consultation that returns all parameters of the Insured for a policy. `(string memory nameComplete,uint64 dateOfBirth,uint32 maritalStatus,string memory pocket,string memory cnpjCpf,uint32 gender,uint32 relationshipPolicyHolder)`
Consult Policy Information	Address Policy smart contract `onlyInsuranceCompany`	Query that returns all policy parameters for a policy. `(string memory proposal,string memory apolice,uint64 startValidity,uint64 endValidity,uint32 apoliceStatus)`
Consult Policy Insurance Company	Address Policy smart contract `onlyInsuranceCompany`	Consultation that returns all parameters of the Insurer for a policy. `address[] memory insuranceCompanyWallets`
Consult Vehicle	Address Policy smart contract `onlyInsuranceCompany`	Query that returns all vehicle parameters of a policy. `(string memory vehicle_type, string memory maker, string memory model,uint256 numer_slides, uint256 year_manufacture, uint256 year_model, uint256 fuel,uint32 newVehicle,uint32 color)`
Consult Vehicle Documents	Address Policy smart contract `onlyInsuranceCompany`	Query that returns all parameters of vehicle documents for a policy. `(string memory license_plate, string memory chassis, string memory renavam,uint32 vehicleFinaced)`

Access

Add Admin	Address `onlyAdmin`	Adds an address as admin of the factory contract and returns the transaction hash.
Remove Admin	Address `onlyAdmin`	Removes an admin role address from the factory contract and returns the transaction hash.
Is Admin	Address	Checks whether the address is admin of the factory contract, returns true / false
add Insurance Company	Address `onlyAdmin`	Adds an address to the Factory Insurance role of the factory contract and returns the transaction hash.
remove Insurance Company	Address `onlyAdmin`	Removes an address to role Insurance Company from the factory contract and returns the transaction hash.
Is Insurance Company	Address	Checks if the address is Insurance Company of the factory contract, returns true / false