

# market 合约技术方案

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V1.0.1

# 修订历史

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## **market 合约技术方案**

### **修订历史**

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# 1. 引言

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## 1.1. 目的

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本文为主要描述market合约的需求、合约接口以及实现方案。

本文档的阅读对象包括项目设计、开发与测试人员、平台维护与运营人员，以及第三方开发者。

## 1.2. 定义、简写和缩略语

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- 无

## 1.3. 参考资料

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- 无

## 2. 需求说明

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- 无

## 3. 合约设计

### 3.1. 合约方法设计

- 初始化

合约初始化的时候存入了5种商品,商品信息如下:

```
goods[1].Name = "商品1";
goods[1].Code = 1;
goods[1].Price = 2500000000;
goods[1].Repertory = 40;

goods[2].Name = "商品2";
goods[2].Code = 2;
goods[2].Price = 500000000;
goods[2].Repertory = 20;

goods[3].Name = "商品3";
goods[3].Code = 3;
goods[3].Price = 1400000000;
goods[3].Repertory = 0;

goods[4].Name = "商品4";
goods[4].Code = 4;
goods[4].Price = 2200000000;
goods[4].Repertory = 30;

goods[5].Name = "商品5";
goods[5].Code = 5;
goods[5].Price = 2200000000;
goods[5].Repertory = 8;
```

#### 3.1.1. Buy

方法原型

```
func Buy(code string)
```

调用结构

```
transaction = {
    "note": "market buy",
    "gasLimit": "25000",
```

```

"calls": [
{
    "contract": "bcbtJ4zVVdGeVNNhBNYRNzoYAvDyyZdtwcDXS",
    "method": "Transfer(types.Address,bn.Number)",
    "params": [ "bcbt2Lj2bDCpp6bff3Y7VB9TJStRzNSKMTenK", "xxxxxx" ]
},
{
    "contract": "bcbtBAVVC4Q158Vgci6TeKeht9hVTBYXsc5ah",
    "method": "Buy(string)",
    "params": [ "1" ]
}]
};

```

#### 功能说明

- 购买商品，输入金额必须是价格的整数倍

### 3.1.2. Reset

#### 方法原型

```
func Reset()
```

#### 调用结构

```

transaction = {
    "note": "market reset",
    "gasLimit": "25000",
    "calls": [
    {
        "contract": "bcbtBAVVC4Q158Vgci6TeKeht9hVTBYXsc5ah",
        "method": "Reset()",
        "params": [],
    }
    ]
};

```

#### 功能说明

- 重置商品库存

### 3.1.3 查询商品列表

#### 查询链接

```
https://test-earth.bcbchain.io/abci_query?  
path="/org9ib7PkkqhjV1A3hMXVgPcoBoxkL3iKdnS/market/goods"
```

#### 返回结果

```
[  
  {"name": "商品1", "code": "1", "price": 250000000, "repertory": 20},  
  {"name": "商品2", "code": "2", "price": 50000000, "repertory": 25},  
  {"name": "商品3", "code": "3", "price": 140000000, "repertory": 5},  
  {"name": "商品4", "code": "4", "price": 220000000, "y": 0},  
  {"name": "商品5", "code": "5", "price": 220000000, "repertory": 30}  
]
```

### 3.1.4 查询交易记录

#### 方法原型

```
https://test-earth.bcbchain.io/abci_query?  
path="/org9ib7PkkqhjV1A3hMXVgPcoBoxkL3iKdnS/market/records/<address>"
```

`<address>` 需要用实际的账户地址替换

#### 返回结果

```
[  
  {"id": 1, "time": "2020-02-29 15:00:00", "address": "xxxxx",  
   "goodsCode": "1", "goodsPrice": 250000000, "buyNum": 1, "used": 250000000},  
  {"id": 2, "time": "2020-02-29 15:00:00", "address": "xxxxx",  
   "goodsCode": "1", "goodsPrice": 250000000, "buyNum": 1, "used": 250000000},  
]
```