



Oracle Blockchain Cloud Service (BCS)

Smart Contract API: Nigeria Customs Automation

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Bank Network

Smart Contract	Description
bankChain.go	

Method: createBankGuarantee

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// CompanyName    string `json:"companyName"`
// RCNumber       int    `json:"rcNumber"`
// TIN            int    `json:"tin"`
// BankName       string `json:"bankName"`
// RefNumber      string `json:"refNumber"`
// Beneficiary    string `json:"beneficiary"`
// GuaranteeAmount int   `json:"guaranteeAmount"`
// Message        string `json:"message"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"bankchain",
  "method":"createBankGuarantee",
  "args":["company1","1234","10101","Big Bank","0001234","British American Tobacco","6000000","test 1234"],
  "chaincodeVer":"v3"
}
```

Method: getHistoryForRecord

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RefNumber      string `json:"refNumber"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"bankchain",
  "method":"getHistoryForRecord",
  "args":["0001234"],
  "chaincodeVer":"v3"
}
```

Method: readState

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RefNumber      string      `json:"refNumber"`
```

```
{  
  "channel":"bankorderer",  
  "chaincode":"bankchain",  
  "method":"readState",  
  "args":["0001234"],  
  "chaincodeVer":"v3"  
}
```

License & Materials Management Network

Smart Contract	Description
licenceAndMaterials.go	

Method: createApproveLicence

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// FactoryNumber string `json:"factoryNumber"`  
// ExpiryDate    int    `json:"expiryDate"`  
// CompanyName   string `json:"companyName"`  
// RCNumber      int    `json:"rcNumber"`  
// ProductRefs   string `json:"productRefs"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "licencenmaterials",  
  "method": "createApproveLicence",  
  "args": ["factory1234", "1510528297", "British American  
Tobacco", "1234", "sugar:wheat:coffee"],  
  "chaincodeVer": "v1"  
}
```

Method: addToMaterialRegistry

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// MaterialId string `json:"materialId"`  
// Name       string  `json:"name"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "licencenmaterials",  
  "method": "addToMaterialRegistry",  
  "args": ["material2634", "sugar cane"],  
  "chaincodeVer": "v1"  
}
```

Method: addProductRegistry

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// CompanyName string `json:"companyName"`  
// RCNumber    int    `json:"rcNumber"`
```

```
// TIN      int    `json:"tin"`
// ProductName string `json:"productName"`
// MaterialId string `json:"materialId"`
// Quantity  int    `json:"quantity"`
// Reason    string `json:"reason"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"licencenmaterials",
  "method":"addProductRegistry",
  "args":["British American Tobacco","1234", "10101", "Marlboro", "material2634", "2000",
"order 6172362"],
  "chaincodeVer":"v1"
}
```

Method: updateProductRegistry

<http://localhost:3100/bcsgw/rest/v1/transaction/invoction>

```
// RCNumber  int    `json:"rcNumber"`
// ProductName string `json:"productName"`
// MaterialId string `json:"materialId"`
// Quantity  int    `json:"quantity"`
// Reason    string `json:"reason"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"licencenmaterials",
  "method":"updateProductRegistry",
  "args":["1234", "Marlboro", "material2634", "-20", "batch 1001"],
  "chaincodeVer":"v1"
}
```

Method: readProductRegistry

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RCNumber  int    `json:"rcNumber"`
// ProductName string `json:"productName"`
// MaterialId string `json:"materialId"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"licencenmaterials",
```

```
"method":"readProductRegistry",
"args":["1234", "Marlboro", "material2634"],
"chaincodeVer":"v1"
}
```

Method: getHistoryForProductRegistry

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RCNumber    int    `json:"rcNumber"`
// ProductName string `json:"productName"`
// MaterialId  string `json:"materialId"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"licencenmaterials",
  "method":"getHistoryForProductRegistry",
  "args":["1234", "Marlboro", "material2634"],
  "chaincodeVer":"v1"
}
```

Method: addDefectiveProduct

<http://localhost:3100/bcsgw/rest/v1/transaction/invoction>

```
// CompanyName string `json:"companyName"`
// RCNumber    int    `json:"rcNumber"`
// TIN         int    `json:"tin"`
// ProductName string `json:"productName"`
// MaterialId  string `json:"materialId"`
// Quantity    int    `json:"quantity"`
// Reason      string `json:"reason"`
```

```
{
  "channel":"bankorderer",
  "chaincode":"licencenmaterials",
  "method":"addDefectiveProduct",
  "args":["British American Tobacco","1234", "10101", "Marlboro", "material2634", "2000",
"order 6172362"],
  "chaincodeVer":"v1"
}
```

Method: updateDefectiveProduct

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// RCNumber    int    `json:"rcNumber"`  
// ProductName string `json:"productName"`  
// MaterialId  string `json:"materialId"`  
// Quantity    int    `json:"quantity"`  
// Reason      string `json:"reason"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "licencenmaterials",  
  "method": "updateDefectiveProduct",  
  "args": ["1234", "Marlboro", "material2634", "-100", "batch 1001"],  
  "chaincodeVer": "v1"  
}
```

Method: readDefectiveProduct

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RCNumber    int    `json:"rcNumber"`  
// ProductName string `json:"productName"`  
// MaterialId  string `json:"materialId"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "licencenmaterials",  
  "method": "readDefectiveProduct",  
  "args": ["1234", "Marlboro", "material2634"],  
  "chaincodeVer": "v1"  
}
```

Method: getHistoryForDefectiveProduct

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RCNumber    int    `json:"rcNumber"`  
// ProductName string `json:"productName"`  
// MaterialId  string `json:"materialId"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "licencenmaterials",  
}
```



```

"method": "getHistoryForDefectiveProduct",
"args": ["1234", "Marlboro", "material2634"],
"chaincodeVer": "v1"
}

```

Excise & Form 41 Process Network

Smart Contract	Description
exciseProcess.go	

Method: createTrader

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```

// CompanyName string `json:"companyName"`
// RCNumber    int   `json:"rcNumber"`
// TIN         int   `json:"tin"`
// PublicKey    string `json:"publicKey"`

{
  "channel": "bankorderer",
  "chaincode": "exciseprocess",
  "method": "createTrader",
  "args": ["British American Tobacco", "1234", "10101", "[48 78 48 16 6 7 42 134 72 206 61 2 1 6
5 43 129 4 0 33 3 58 0 4 21 162 242 84 40 78 13 26 160 33 97 191 210 22 152 134 162 66 12 77
221 129 138 60 74 243 198 34 102 209 14 48 16 2 98 96 172 47 170 216 228 169 103 121 153
100 84 111 33 13 106 42 46 227 52 91]"],
  "chaincodeVer": "v1"
}

```

Method: createForm41Payment

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```

// RCNumber    int   `json:"rcNumber"`
// TIN         int   `json:"tin"`
// Status       string `json:"status"`

{
  "channel": "bankorderer",
  "chaincode": "exciseprocess",
  "method": "createForm41Payment",
  "args": ["1234", "10101", "pending"],
  "chaincodeVer": "v1"
}

```

```
}
```

Method: updateForm41PaymentStatus

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// RCNumber    int    `json:"rcNumber"`  
// Status      string `json:"status"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "updateForm41PaymentStatus",  
  "args": ["1234", "paid"],  
  "chaincodeVer": "v2"  
}
```

Method: createExciseApplication

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// ApplicationId string `json:"applicationId"`  
// CompanyName  string `json:"companyName"`  
// RCNumber     int    `json:"rcNumber"`  
// TIN          int    `json:"tin"`  
// Status       string `json:"status"`  
// FormHash     string `json:"formHash"`  
// DCGSig       string `json:"dcgSig"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "createExciseApplication",  
  "args": ["22", "British American  
Tobacco", "1234", "10101", "pending", "936a185caaa266bb9cbe981e9e05cb78cd732b0b3280eb94  
4412bb6f8f8f07af", "DCG signature Here"],  
  "chaincodeVer": "v2"  
}
```

Method: updateExciseApplication

<http://localhost:3100/bcsgw/rest/v1/transaction/invoke>

```
// ApplicationId string `json:"applicationId"`  
// Status       string `json:"status"`
```

```
{
  "channel": "bankorderer",
  "chaincode": "exciseprocess",
  "method": "updateExciseApplication",
  "args": ["22", "active"],
  "chaincodeVer": "v3"
}
```

Method: createlicencePayment

<http://localhost:3100/bcsgw/rest/v1/transaction/invoction>

```
// InvoiceRef      string `json:"invoiceRef"`
// InvoiceAmount   int    `json:"invoiceAmnt"`
// PaymentRef      string `json:"paymentRef"`
// PaymentAmount   int    `json:"paymentAmount"`
// Status          string `json:"status"`
// FactoryNumber   string `json:"factoryNumber"`
```

```
{
  "channel": "bankorderer",
  "chaincode": "exciseprocess",
  "method": "createlicencePayment",
  "args": ["invoice2032", "23000000", "ref1000101", "23000000", "pending", "factory1"],
  "chaincodeVer": "v3"
}
```

Method: updatelicencePayment

<http://localhost:3100/bcsgw/rest/v1/transaction/invoction>

```
// InvoiceRef      string `json:"invoiceRef"`
// Status          string `json:"status"`
```

```
{
  "channel": "bankorderer",
  "chaincode": "exciseprocess",
  "method": "updatelicencePayment",
  "args": ["invoice2032", "paid"],
  "chaincodeVer": "v3"
}
```

Method: getHistoryForRecord

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RecordKey string `json:"recordKey"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "getHistoryForRecord",  
  "args": ["invoice2032"],  
  "chaincodeVer": "v3"  
}
```

Method: readTrader

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// RCNumber string `json:"rcNumber"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "readTrader",  
  "args": ["1234"],  
  "chaincodeVer": "v3"  
}
```

Method: readLicencePayment

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// InvoiceRef string `json:"invoiceRef"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "readLicencePayment",  
  "args": ["invoice2032"],  
  "chaincodeVer": "v3"  
}
```

Method: readExciseApplication

<http://localhost:3100/bcsgw/rest/v1/transaction/query>

```
// ApplicationId string `json:"applicationNumber"`
```

```
{  
  "channel": "bankorderer",  
  "chaincode": "exciseprocess",  
  "method": "readExciseApplication",  
  "args": ["22"],  
  "chaincodeVer": "v3"  
}
```