



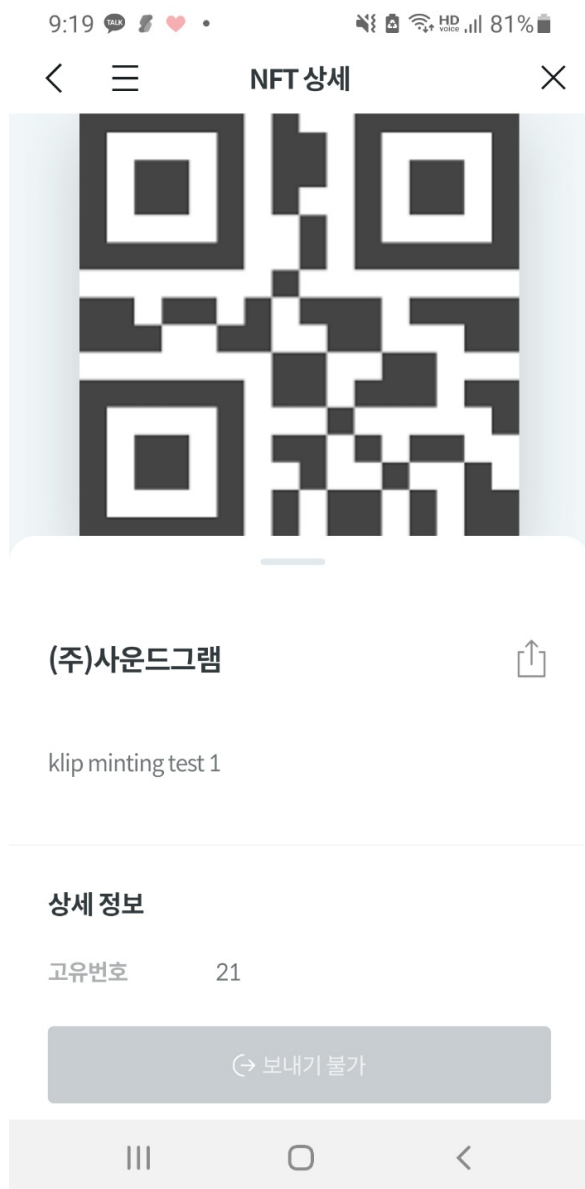
## abi 정보와 그에 맞는 파라미터를 전해주어 원하는 smart contract 함수를 실행가능

```
const bappName = security.name;
const from = security.testHajineKlip;
const to = security.contract_address;
const value = "0";
const abi = "{\"constant\": false, \"inputs\": [{\"name\": \"to\", \"type\": \"address\"}, {\"name\": \"approved\", \"type\": \"bool\"}], \"outputs\": [{\"name\": \"\", \"type\": \"bool\"}], \"stateMutability\": \"payable\"}";
const params = ["\\0xd6646EA5152b9d8e244a4d24027D1D4f5Abc0Ee5\\", true];
const res = await prepare.executeContract({ bappName, from, to, value, abi, params });
if (res.err) {
  console.log(res.err);
} else if (res.request_key) {
  request_key = res.request_key;
}
```

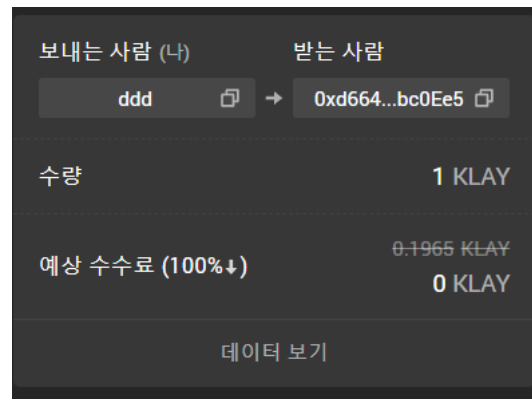
```
const bappName = security.name;
const to = security.soundgram_contract_address;
const value = "0";
const abi = "[{\"constant\":false,\"inputs\":{\"name\":\"_tokenId\",\"type\":\"uint256\"},{\"name\":\"_price\",\"type\":\"uint256\"}],";
const params = "[\\\"21\\\",\\\"10000000000000000\\\"]";
const res = await prepare.executeContract({ bappName, to, value, abi, params })
if (res.err) {
  console.log(res.err);
} else if (res.request_key) {
  request_key = res.request_key;
}
```

```
request(request_key, () => alert('모바일 환경에서 실행해주세요!'));
// //TODO 클라이언트에서 다시 웹으로 돌아오는것 확인하는 방법찾기
sleep(13000);
try {
  const res2 = await getResult(request_key);
  console.log(res2.status);
  if (res2.status == 'Completed') {
    console.log(res2.result);
  }
} catch (e) {
  console.log('excute getResult error');
  console.log(e);
}
```

2022/05/16



스코프에서 트랜잭션 확인



```
await buyToken(account, 21, "1");
```

```
const msg=await getTokenPrice(21);
```

1000000000000000

0xfb23df6b851f415ca3311e6c9cf529c2921f38d0a25704c6cba15235199391e0 COPY

Overview Success

TX Type

Fee Delegated Smart Contract Execution

Block #

90708833

From → To

0x4e85...83d364 → 0xd664...bc0ee5

Token Transfers

0

NFT Transfers

1

Fee Payer

0x4e85...83d364

Time

19 seconds ago (May 15, 2022 16:09:46 / UTC+9)

Nonce

11

Amount

1 KLAY

Gas Price

0.00000075 KLAY

Gas Used

106,000

Gas Limit

500,000

TX Fee

0.0795 KLAY

MethodSig

0xc2db2c42

Method

purchaseToken(uint256)

NFT Transfers

Internal Transactions

Event Logs

Input Data

TYPE OF TRACE ADDRESS	FROM	→	TO	METHOD	AMOUNT(KLAY)	GAS LIMIT
CALL	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	1	465,400

오픈씨에서 확인

Details

Contract Address

0x8817...604f

Token ID

21

Token Standard

ERC-721

Blockchain

Klaytn

Creator Fees

0%

Listings

Offers

No offers yet

Item Activity

Filter

Event	Price	From	To	Date
Transfer		4B74E8	you	6 hours ago
Airdrop		NullAddress	4B74E8	5 days ago

## Kaikas to Klip

클립과 같은 컨트랙트와 abi를 실행시키면 가능

```
//판매 권한부여
const myContract = new cav.klay.Contract(KIP17Fullabi, klipContract);
myContract.methods.setApprovalForAll(DEPLOYED_ADDRESS_ALBUMSALES, true).send({
  from: addressOwner,
  gas: "250000"
}).then(function (receipt) {
  if(receipt.transactionHash) {
```

```

        console.log("approve", receipt.transactionHash);
    }
})

```

카이카스는 단순 조회가 아니라면 전자서명이 필요

```

//판매등록
const { rawTransaction: senderRawTransaction } = await cav.klay.signTransaction({
  type: 'FEE_DELEGATED_SMART_CONTRACT_EXECUTION',
  from: addressOwner,
  to: DEPLOYED_ADDRESS_ALBUMSALES,
  data: salesContract.methods.setForSale(tokenId, cav.utils.toPeb(price, 'KLAY')).encodeABI(),
  gas: '500000',
  value: cav.utils.toPeb('0', 'KLAY'),
})

```

```

//구매
const { rawTransaction: senderRawTransaction } = await cav.klay.signTransaction({
  type: 'FEE_DELEGATED_SMART_CONTRACT_EXECUTION',
  from: addressOwner,
  to: DEPLOYED_ADDRESS_ALBUMSALES,
  data: salesContract.methods.purchaseToken(tokenId).encodeABI(),
  gas: '500000',
  value: cav.utils.toPeb(price, 'KLAY'),
})

```

이후 아래와 같이 서명된 트랜잭션을 보낸다. feePayer설정도 이때 가능.

```

cav.klay.sendTransaction({
  senderRawTransaction: senderRawTransaction,
  feePayer: feePayer.address,
})
.then(function(receipt){
  if (receipt.transactionHash) {
    console.log("buyToken", receipt.transactionHash);
  }
});
} catch (err) {
  console.error("buyToken", err);
}

```

카이카스가 보유중인 13번 토큰 판매등록 후 클립 지갑으로 구매

```

await setSaleOnCont(account, 13, "0.0001")

```

```

const msg=await getTokenPrice(13);

```

```

1000000000000000

```

오픈씨에서 확인

Details

Contract Address

0x8817...604f

Token ID

13

Token Standard

ERC-721

Blockchain

Klaytn

Creator Fees

0%

No offers yet

Item Activity

Filter

Event	Price	From	To	Date
↔ Transfer		you	4B74E8	6 days ago <a href="#">🔗</a>
↔ Transfer		268AC5	you	16 days ago <a href="#">🔗</a>
↔ Transfer		4B74E8	268AC5	19 days ago <a href="#">🔗</a>
↔ Transfer		9380EC	4B74E8	19 days ago <a href="#">🔗</a>
↔ Transfer		4F563D	9380EC	19 days ago <a href="#">🔗</a>

## issue

13번 토큰 거래시 0.0001klay로 판매등록후 1klay지불하자 1klay로 거래가 되었음

```
function purchaseToken(uint256 _tokenId) public payable {
    uint256 price = tokenPrice[_tokenId];
    address tokenSeller = nftAddress.ownerOf(_tokenId);

    require(msg.value >= price, "caller sent klay lower than price"); //가격 이상의 비용을 지불해야 함.
    require(msg.sender != tokenSeller, "caller is token seller"); //본인은 구매 불가
    address payable payableTokenSeller = address(uint160(tokenSeller));

    payableTokenSeller.transfer(msg.value);

    nftAddress.safeTransferFrom(tokenSeller, msg.sender, _tokenId); //tokenSeller->구매자 토큰 전송
    tokenPrice[_tokenId] = 0;
}
```

솔리디티 코드 내부에서 보낸값이 설정값보다 크면 거래 성사되어 생겼던 이슈.

클레이튼 스코프에서 거래가 성사되어도 트랜잭션에서 받은 구매대금을 확인 할 수 없었음.

Address (Hex)

0x4e8542e2616cac575bddcd2ed84aca0b0b83d364

COPY

Total TXs

14 TXs

Balance

19.7741955 KLAY

Transactions

Internal Transactions

NFT Transfers

KIP17 Balance

KIP37 Balance

Fee Paid

TX HASH	BLOCK #	TIME	FROM	→	TO	METHOD	TX TYPE	AMOUNT(KLAY)	TX FEE(KLAY)
0xfb23...9391e0	90708833	5 hours ago	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	Fee...Smart Contract Execution	1.000000	0.0795
0x3ec...abe66	90297939	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	Fee...Smart Contract Execution	0.000100	0.046407
0x80b...7d8a9	90271721	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	Fee...Smart Contract Execution	0.000000	0.041382
0xc5b4...3c5a1f	90271685	5 days ago	0x4e85...83d364	→	—	-	Cancel	0.000000	0.01575
0x3fe...d4186	90271272	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	Fee...Smart Contract Execution	0.000000	0.041382
0xcfaa...5461d4	90220198	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	setForSale	Fee...Smart Contract Execution	0.000000	0.053732...
0xac69...7f5557	90220156	5 days ago	0x4e85...83d364	→	0x8817...6c604f	setApprovalF...	Legacy Transaction	0.000000	0.041081...
0x812...0d7b0	90220052	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	setForSale	Fee...Smart Contract Execution	0.000000	0.038742
0x75cf...e6f9e0	90215400	5 days ago	0x4e85...83d364	→	0x9ee2...0fb782	setCompleted	Legacy Transaction	0.000000	0.023052...
0xa03f...4fb09e	90215398	5 days ago	0x4e85...83d364	→	—	0x60806040	Legacy Transaction	0.000000	0.657101...
0x0f8c...feba72	90215396	5 days ago	0x4e85...83d364	→	0x9ee2...0fb782	setCompleted	Legacy Transaction	0.000000	0.034302...
0x53ee...6bfc4e	90215394	5 days ago	0x4e85...83d364	→	—	0x60806040	Legacy Transaction	0.000000	0.153371...
0xd28d...f02453	90207467	6 days ago	0x4b74...b93ac6	→	0x4e85...83d364	-	Fee...Value Transfer	20.000000	0.02325
0x12b6...5faffc	89668468	12 days ago	0x4b74...b93ac6	→	0x4e85...83d364	-	Fee...Value Transfer	1.000000	0.02325

인터널 트랜잭션에서 확인할 수 있었음. 스마트 컨트렉트에서 보낸 거래내역은 인터널 트랜잭션에서 확인해야함.

Account

0x4e8542e2616cac575bddcd2ed84aca0b0b83d364

COPY

Overview

Address (Hex)

0x4e8542e2616cac575bddcd2ed84aca0b0b83d364

COPY

Total TXs

14 TXs

Balance

19.7741955 KLAY

Transactions

Internal Transactions

NFT Transfers

KIP17 Balance

KIP37 Balance

Fee Paid

TX HASH	BLOCK #	TIME	FROM	→	TO	METHOD	AMOUNT(KLAY)
0xfb23...9391e0	90708833	5 hours ago	0x4e85...83d364	→	0xd664...bc0ee5	purchaseToken	1
0xc622...628517	90249589	5 days ago	0xd664...bc0ee5	→	0x4e85...83d364	-	1
0xcfaa...5461d4	90220198	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	setForSale	0
0xac69...7f5557	90220156	5 days ago	0x4e85...83d364	→	0x8817...6c604f	setApprovalF...	0
0x75cf...e6f9e0	90215400	5 days ago	0x4e85...83d364	→	0x9ee2...0fb782	setCompleted	0
0xa03f...4fb09e	90215398	5 days ago	0x4e85...83d364	→	0xd664...bc0ee5	0x60806040	0
0x0f8c...feba72	90215396	5 days ago	0x4e85...83d364	→	0x9ee2...0fb782	setCompleted	0
0x53ee...6bfc4e	90215394	5 days ago	0x4e85...83d364	→	0x9ee2...0fb782	0x60806040	0

<<

<

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>

>>

현재는 uint256 사용중인데 이를 uint128등으로 줄여 수수료 차이를 확인해볼 예정

```
mapping(uint256 => uint256) public tokenPrice;
```