

# Free TON subscriptions

Developed by **TON RED** team

**Github:** <https://github.com/tonred/tonclick> (see for detail documentation)

**Off-chain demo Github:** <https://github.com/tonred/tonclick-demo>

**Off-chain demo site:** <https://demo.ton.click/>

**Root address in devnet:** 0:61688335efeaffefc7b855e4e814dd6c7a2e768ebdf3bf0eef45004ce166c791

**DeBot for Service address in devnet:** 0:3a4dfa2c931767f706b1a94a22699117bc8ea361a60f2ff3bccc70cd3827c456

**DeBot for Users address in devnet:** 0:a8d4f71427003c3e75d5047003da399da2809450d7c783f5311d2837de324425

**TG:** @Abionics, @get\_username

# Key features

01

On-chain and off-chain subscriptions

04

Infinity amount of services and users, no mapping

02

Many subscription plans for each services

05

On-chain and off-chain demos

03

Custom configuration of each subscription plan

06

Native Ton and TIP3 tokens support

# Building



**make setup**

**make compile**  
**make test**

**make deploy**

*See more technical details in Github repository*

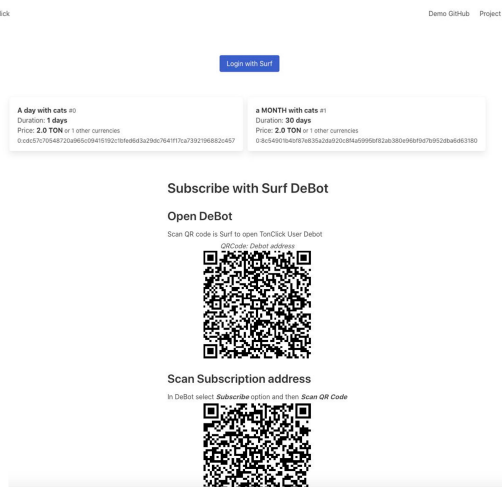
# Off-chain demo

Open demo site

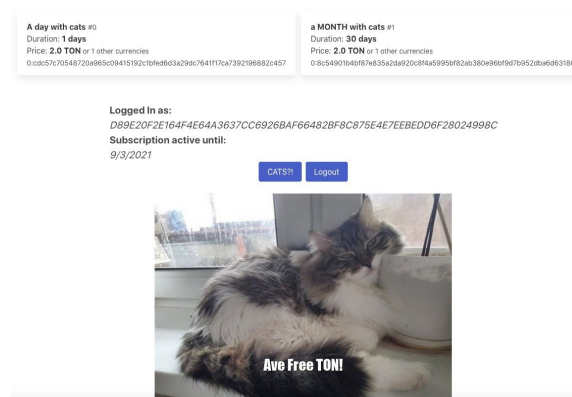
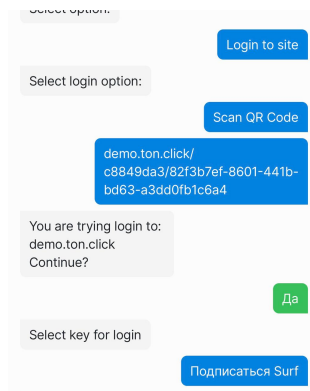
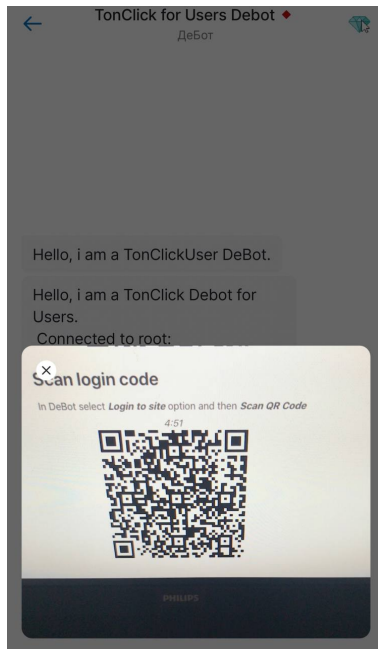
Open Debot for Users  
on phone, scan QR code

Login via  
QR code

Site automatically  
login you



Demo QRHub Project QRHub



# On-chain demo

Everyone can easily integrate on-chain service with subscriptions. To do this, your contract should implement [IOnchain.sol](#) class. There is a [demo](#) of such service, that give 10 tokens to everyone who has a subscription

**Important:** for on-chain plans user subscriptions must be created by user address

```
contract OnchainDemo is IOnchain {  
  
    uint128 public gift = 10 ton; // just a sample  
  
    constructor(  
        address root,  
        address service,  
        address[] subscriptionPlans,  
        uint128 minValue  
    ) public IOnchain(root, service, subscriptionPlans, minValue) {  
        tvml.accept();  
    }  
  
    function execute(address subscriptionPlan, TvmCell actionPayload, TvmCell /*someArgs...*/) public  
        _checkSubscription(subscriptionPlan, actionPayload);  
    }  
  
    function _action(address user, TvmCell /*payload*/) internal override {  
        tvml.accept();  
        user.transfer({value: gift}); // just a sample  
        // do something with payload...  
    }  
}
```

# Debot for Services

## Create service

←

TonClick for Services Debot • DeBot

Hello, i am a TonClickService DeBot.

Hello, i am a TonClick Debot for Services.  
Connected to root:  
0:61688335efeaffec7b855e4e814dd6c7a2e768ebdf3bf0eef45004ce166c791

Select option:

Create new Service account

Input Service Name

Demo Service

Input Service Description

Funny Cats

Input Service URL

<https://demo.ton.click>

Deploy?

Yes

How would you like to sign?

Sign with Surf

## Create subscription plan

Active subscription plans: 0

Select option:

Create new subscription plan

Input Subscription Name

A day with cats

Input Service Description

Have a great day looking at pictures of cats

Input Service Terms URL

<https://demo.ton.click/terms>

Subscription duration (in days):

1

Max subscriptions for plan(set 0 to skip):

0

Price in TON(set 0 to skip):

2

Add TIP3 price?

Yes

Token Root address

My Rubies

Select asset

Enter manually

Scan QR code

## Manage subscription plan

Active subscription plans: 2

Select option:

Manage active plans

Select plan:

#0: A day with cats

Subscription ID: 0  
Address:  
0:cdc57c70548720a965c09415192c1bfed6d3a29dc7641f17ca7392196882c457  
Title: A day with cats  
Description: Have a great day looking at pictures of cats  
Terms URL: <https://demo.ton.click/terms>  
Duration: 1 days  
Total Users: 0  
Active Users: 0

Prices:

TON: 2.000000000  
0:65e886b9675809b92d716bef79cba38bffc9577407202a85ec6f498457eab37  
6: 300000

Select option:

Change price

Activate/Deactivate

# Debot for Users

## Subscribe

←

TonClick for Users Debot ♦  
ДеБот

🔒

Service address:  
0:ca16254d936ecd50b31a45af581f  
e9530c4c16f3d46b805922ac9ca9  
56e12750

#0 A day with cats

Have a great day looking at pictures  
of cats

Terms: <https://demo.ton.click/terms>

Duration: 1 days

Select currency

TON: 2.000000000

Price: 2.000000000 TON

Select option:

Subscribe by public key

Auto Renew?

Да

## Manage subscription

←

TonClick for Users Debot ♦  
ДеБот

🔒

042d9cf33d6572d56991f0d16245  
9c31bce7cd64d9d5ba605beb1064  
e0e3f137

Ok

Select option:

My subscriptions

Select plan

#0: A day with cats

Title: A day with cats  
Description: Have a great day  
looking at pictures of cats  
Terms URL: [https://demo.ton.click/  
terms](https://demo.ton.click/terms)  
Duration: 1 days

Select option:

Extend

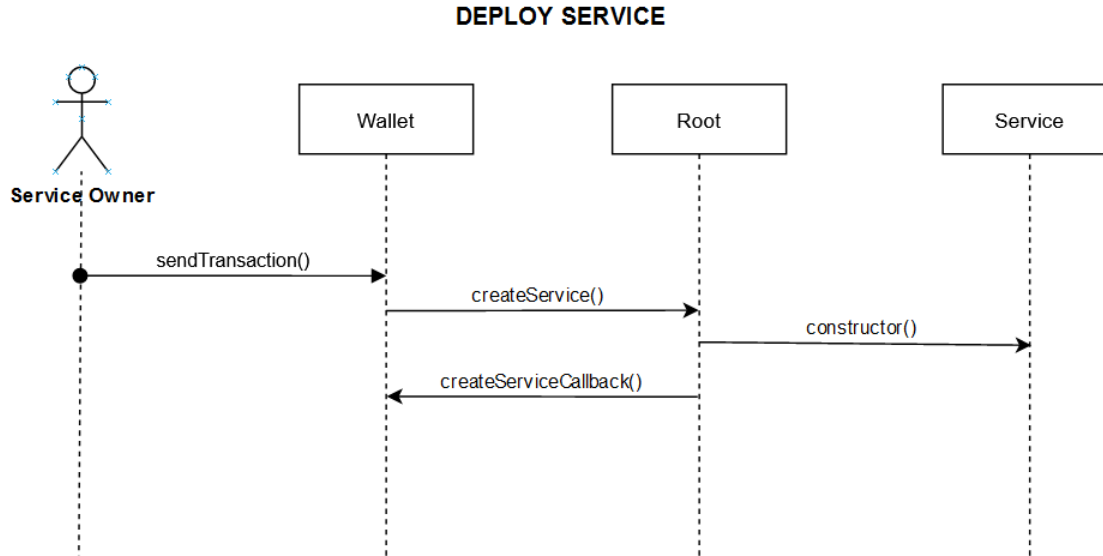
Unsubscribe

Sample addresses for subscription:

0:cdc57c70548720a965c09415192c1bfed6d3a29dc7641f17ca7392196882c457

0:8c54901b4bf87e835a2da920c8f4a5995bf82ab380e96bf9d7b952dba6d63180

# Workflow for service



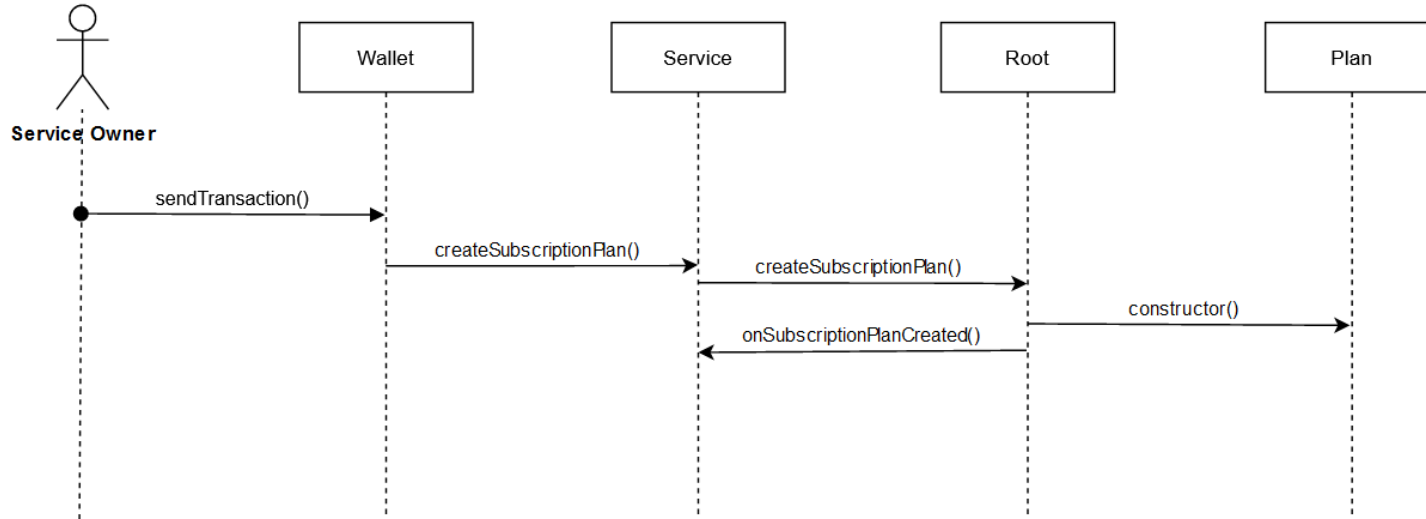
Infinity amount of services can be deployed from root contract

To deploy new service use `createService` method in root



# Workflow for subscription plan

## DEPLOY PLAN

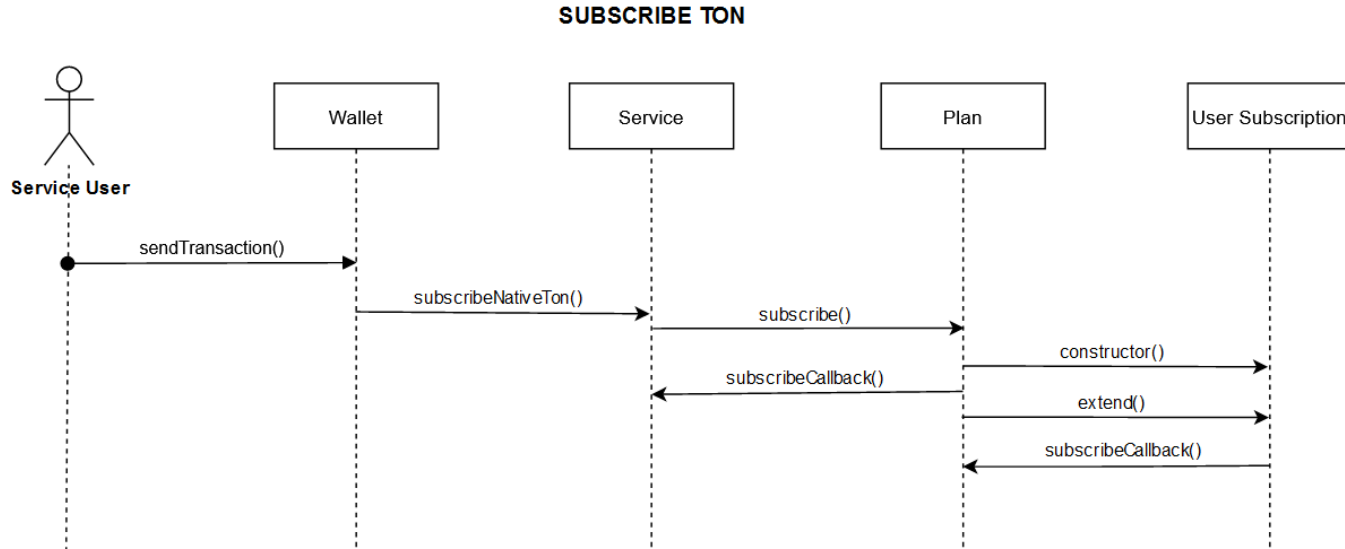


Each service can create many subscription plans

To deploy new subscription plans use createSubscriptionPlan method in service

Subscription plan can have max count of subscribers

# Workflow for subscribe



User can easily subscribe or extend subscription plan. He must not remember if subscription already exists. If user want to subscribe, he should create a payload in service via buildSubscriptionPayload function, and then pass this payload depends on payment method. Accepts both native Ton and TIP3 (see GitHub)

# Testing

✓ Test Results	1 sec 912 ms
✓ test_contacts	1 sec 912 ms
✓ TestContacts	1 sec 912 ms
✓ test_extend_after_expire	165 ms
✓ test_once_subscribe	133 ms
✓ test_set_withdrawal_fee	100 ms
✓ test_subscribe	129 ms
✓ test_subscription_change_return	123 ms
✓ test_subscription_expire	110 ms
✓ test_subscription_long_term	109 ms
✓ test_subscription_ton	119 ms
✓ test_unsubscribe	136 ms
✓ test_user_profile	208 ms
✓ test_withdrawal_workflow	580 ms

✓ Test Results	593 ms
✓ test_onchain_demo	593 ms
✓ TestOnchainDemo	593 ms
✓ test_not_enough_tokens	110 ms
✓ test_subscription_is_expired	139 ms
✓ test_subscription_is_not_exists	101 ms
✓ test_success	152 ms
✓ test_unsupported_subscription_plan	91 ms