#37 HTTP Notification Provider Contest

github: https://github.com/Arseny271/FreeTON-HttpNotificationProviderContest

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api docs: https://api.events.ton.arsen12.ru/

statistics page: https://events.ton.arsen12.ru/

This document contains instructions for deploying and configuring the provider and consumer of notifications in Free TON.

1. Provider

Dependencies: MongoDb, NodeJs

- Copy the provider folder to your server.

- Generate a keypair and write them into the secret/provider.keys.json. This keys will be used to sign the sent notifications

- Edit configs in configs folder:

provider-info.json - Provider information

config-mongo.json - Contains database url

config-kafka.json - Connection parameters for kafka

config-server.json –

host, port - server api parameters

max_concurrency - maximum number of simultaneously processed messages

first_attempt_timeout - message timeout on first send (if 0, no timeout)

next_attempts_timeout - message timeout on subsequent send

max_attempts - maximum number of retry attempts to send

retry_time_base - the base of the number to calculate the delay time between retransmissions. Time between dispatches is calculated as n^x, where **n** is **retry_time_base** and **x** is a number of unsuccessful attempts.

- Run node init.js to initialize the database.

- Run node index.js to start the message provider

2. Consumer

The consumer is an intermediate layer, he receives messages from the provider, decrypts them and forwards them to another address in accordance with the specified rules. In fact, it would be more correct to call this module a router

For the convenience of users, the consumer has an admin panel. It simplifies consumer configuration and allows you to view the last received messages in decrypted form.

Dependencies: MongoDb, NodeJs

- Copy the consumer folder to your server

- Edit configs in configs folder:

  config-mongo.json - Contains database url

  config-server.json –

    receiverPort, receiverEndpoint - port and url for receiving notify from providers

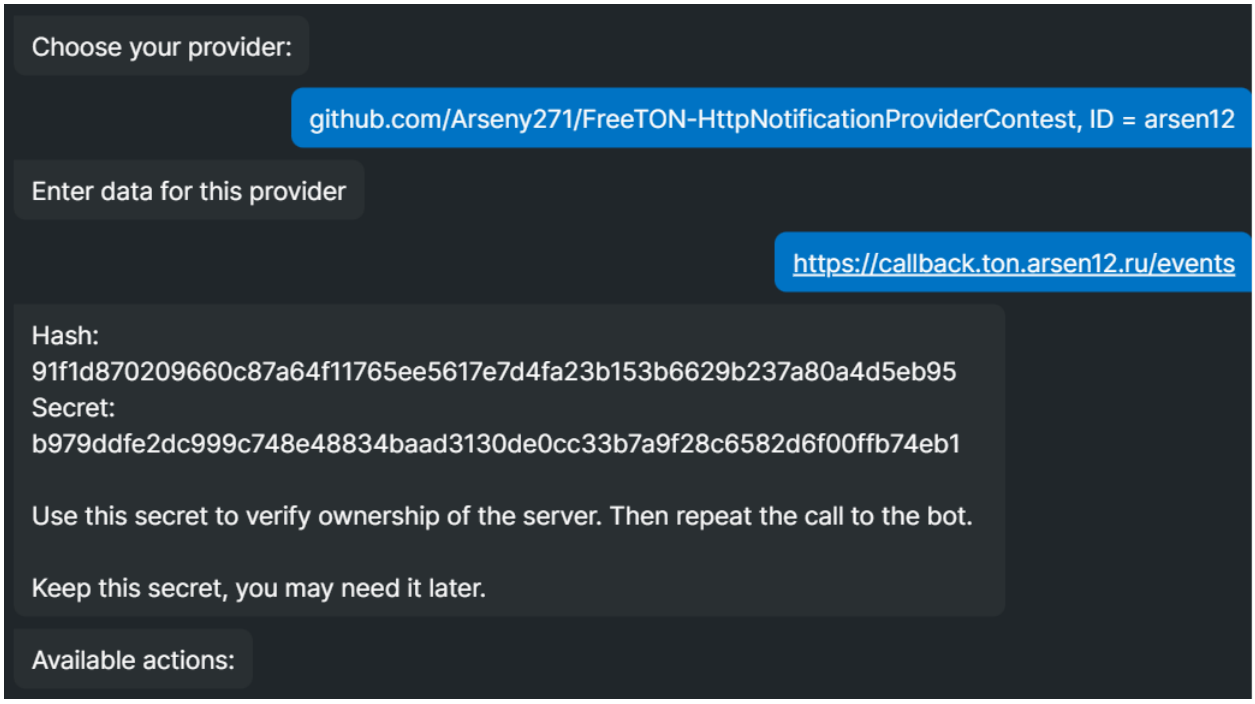
    adminPanelPort - Port on which the admin panel will run

- Run node init.js to initialize database.

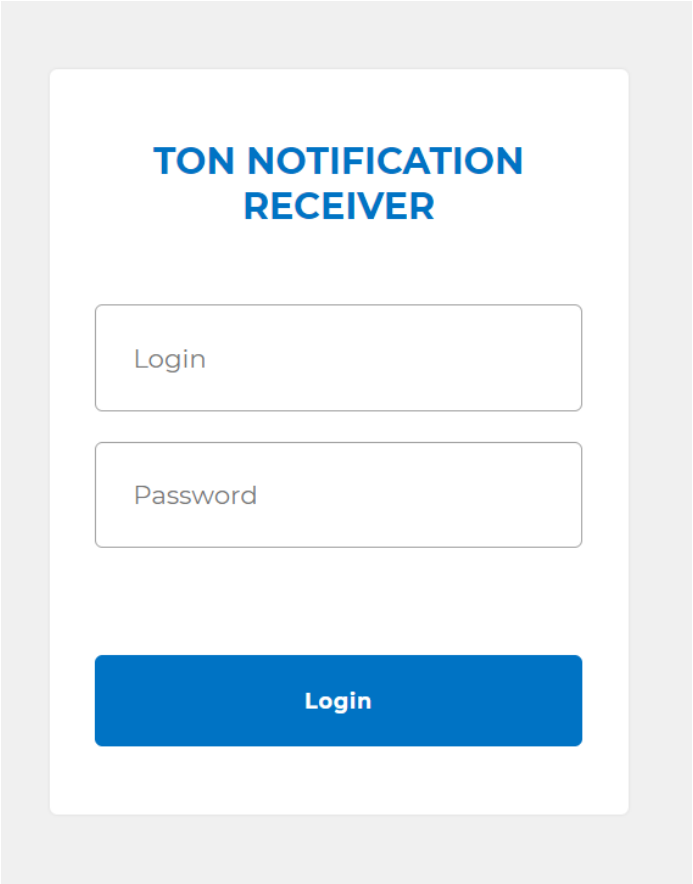
- Run node index.js to start the consumer.

3. Configuring a provider to receive notifications

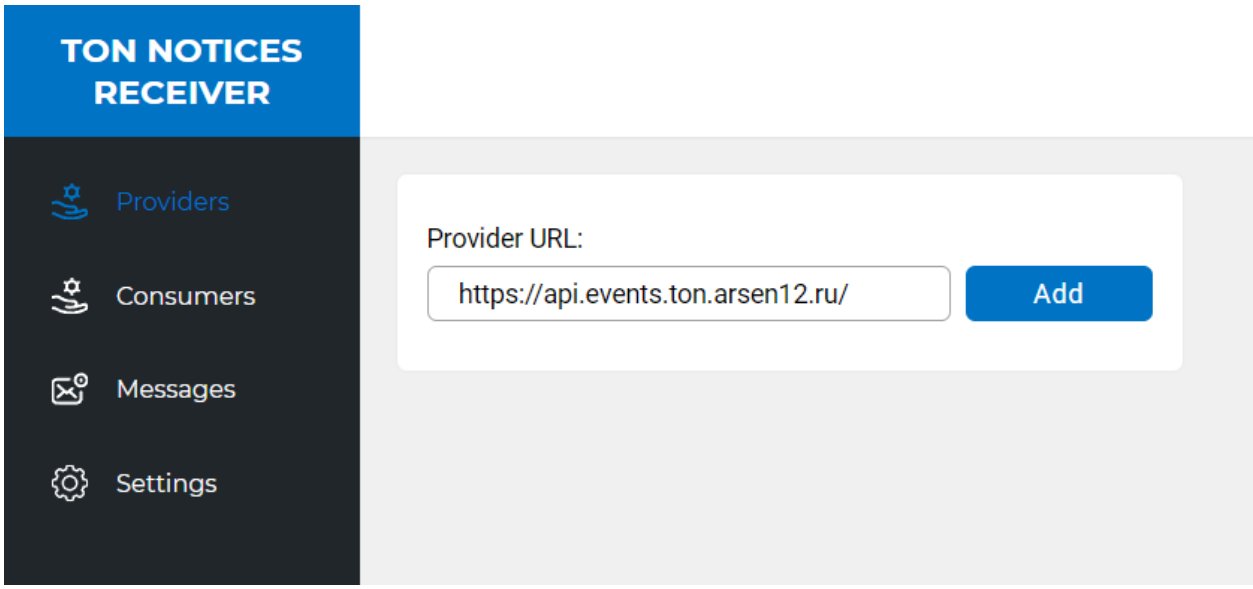
- Start the debot and send it a callback url (id = arsen12). In response, the bot will send a hash and a secret.



- Open your consumer admin panel (default login and password **admin admin**).



- On the providers tab, add arsen12 (url: https://api.events.ton.arsen12.ru/) to the list of providers.

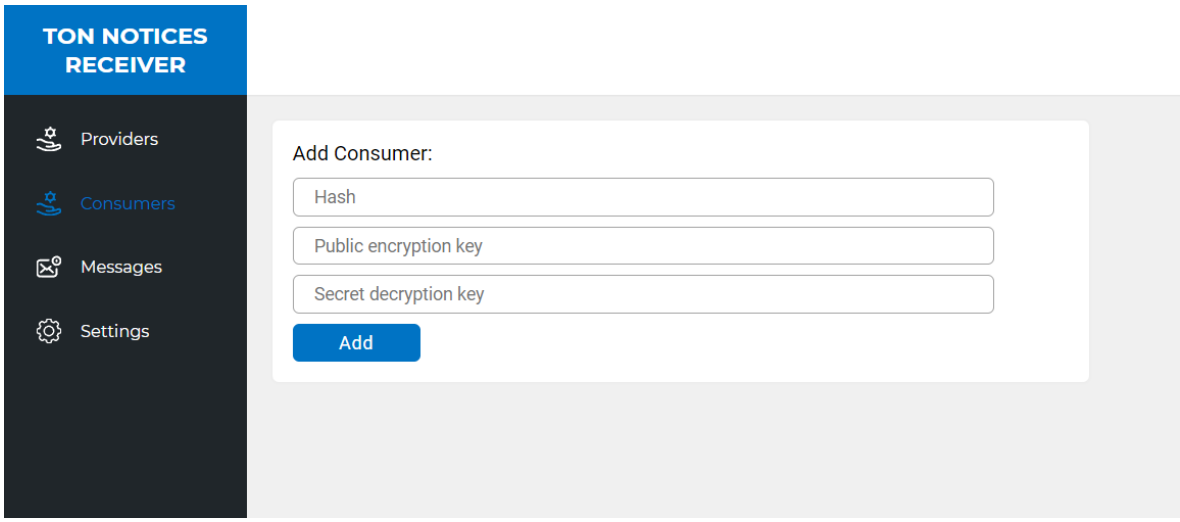


- Open the consumers tab and create a consumer with the following parameters:

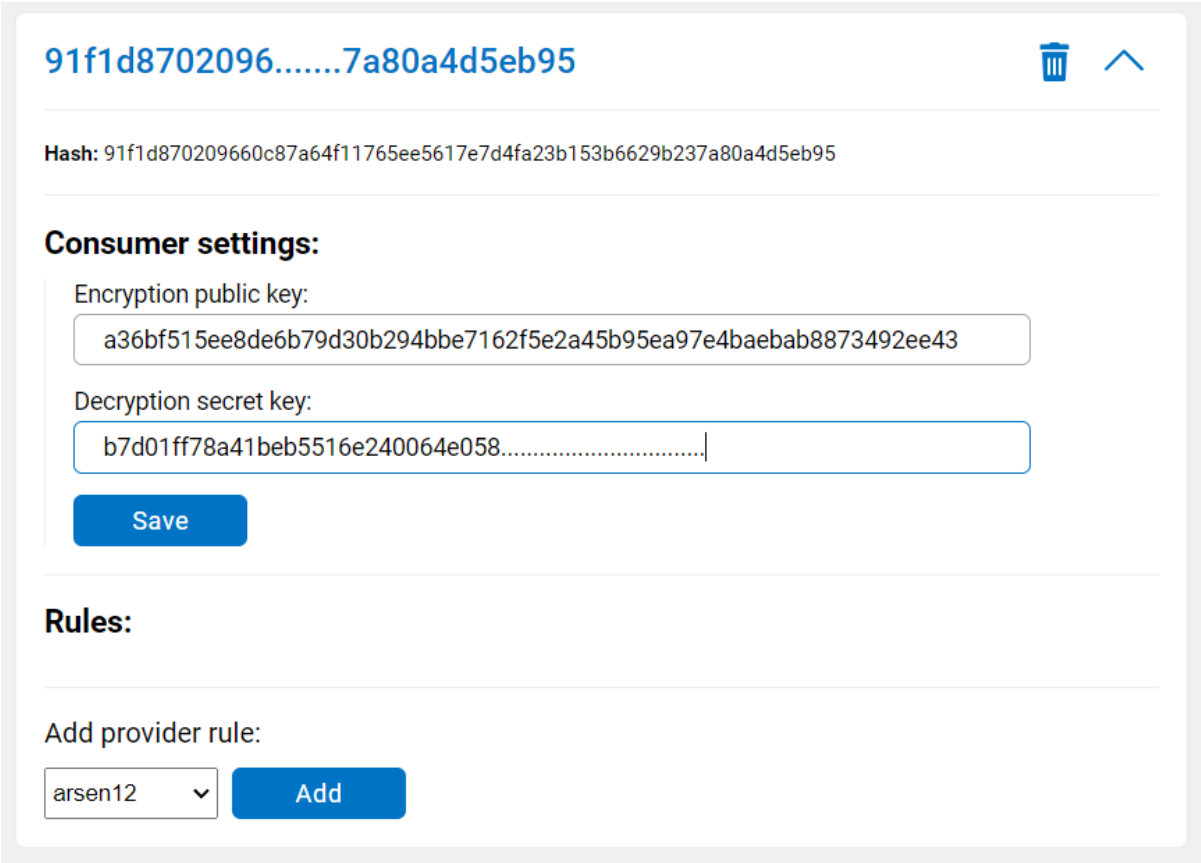
Hash - the hash that the debot told you

Public encryption key – The public key of the service. At the moment it is a constant: a36bf515ee8de6b79d30b294bbe7162f5e2a45b95ea97e4baebab8873492ee43

Secret decryption key - The secret key that the debot told you when the contract was deployed

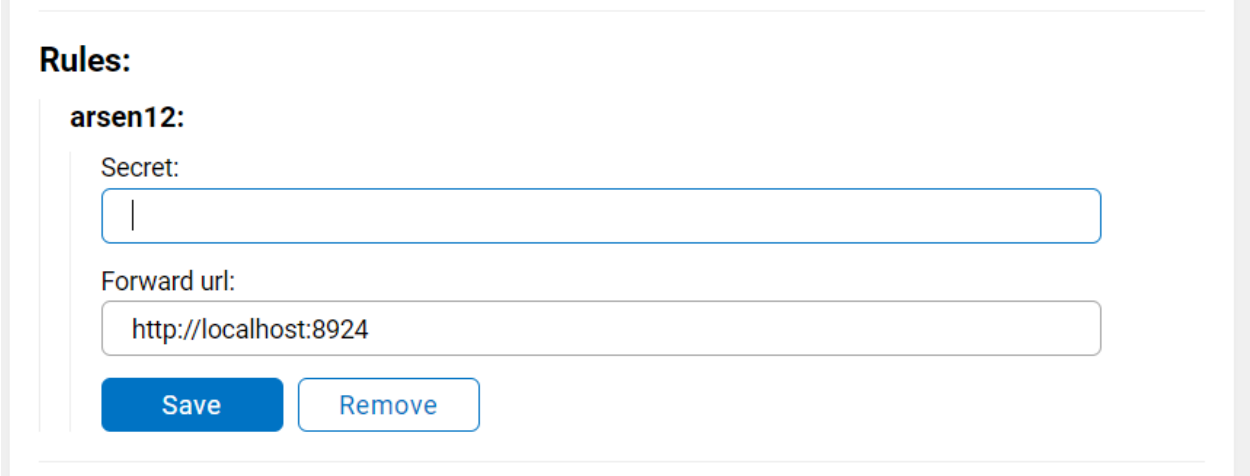


- After successful creation, you will see something like this. Select the provider ID and click add rule

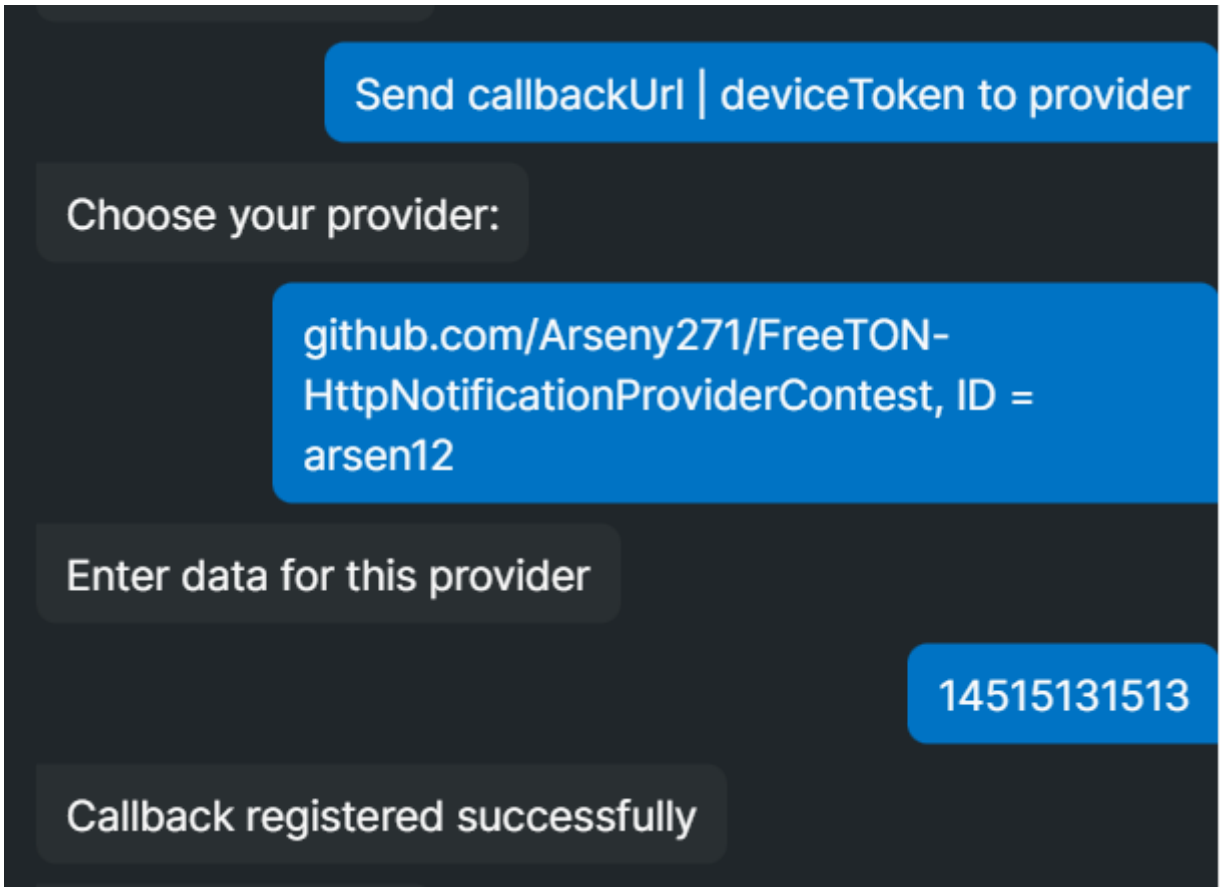


Secret is used to prove ownership of the server. Indicate the secret that debot told you.

Forward url is the address to which the decrypted notification will be sent



After creating the rule, write the debot in turn (instead of the url callback, you can send any non-empty text), if you specified the correct secret in the provider's settings, the debot will inform you that the callback has been successfully registered, now you will receive notifications about events in the network



4. About https support

To support https, it is proposed to use nginix with similar configs.

```
server {
   server_name debot.events.ton.arsen12.ru api.events.ton.arsen12.ru;
   location / {
      proxy_pass http://localhost:8000;
      proxy_http_version 1.1;
      proxy_set_header Upgrade $http_upgrade;
      proxy_set_header Connection 'upgrade';
      proxy_set_header Host $host;
      proxy_cache_bypass $http_upgrade;
   }

   listen 443 ssl;
   ssl_certificate /etc/letsencrypt/live/debot.events.ton.arsen12.ru/fullchain.pem;
   ssl_certificate_key /etc/letsencrypt/live/debot.events.ton.arsen12.ru/privkey.pem;
   include /etc/letsencrypt/options-ssl-nginx.conf;
   ssl_dhparam /etc/letsencrypt/ssl-dhparams.pem;
}
```

5. About performance

Despite the fact that the program is written in js and the single-threaded nature of this language, the code tries to use all processor cores using multiprocessing. This is important because each notification is signed with a secret key, which is computationally expensive and single-threaded processing may not provide the desired performance.