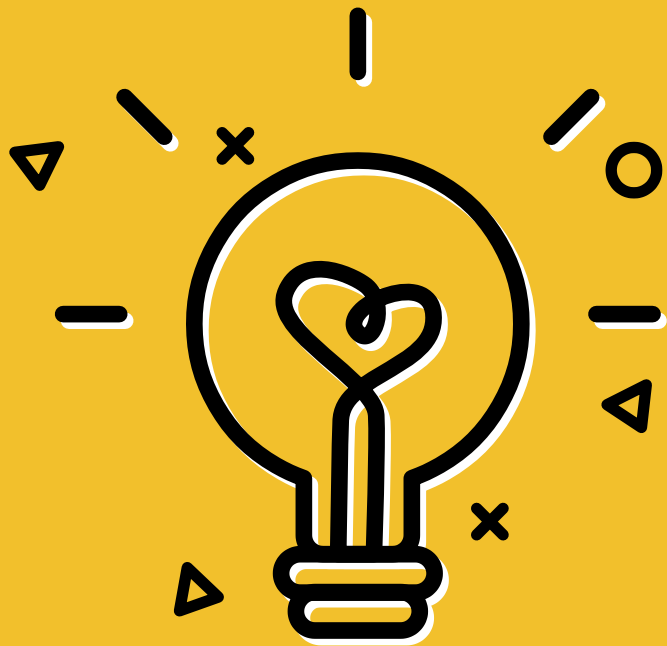




Мессенджеры — почему
всё НАСТОЛЬКО плохо ?

Setup [Matrix]



- Что вообще было и есть ?



- Древнее, но +/- стандартное
- траблы с кодировками, медиа, плагинами

IRC



- Умершее



ICQ,



Skype,



MSN

- Новое, открытое



ToX,



Matrix,

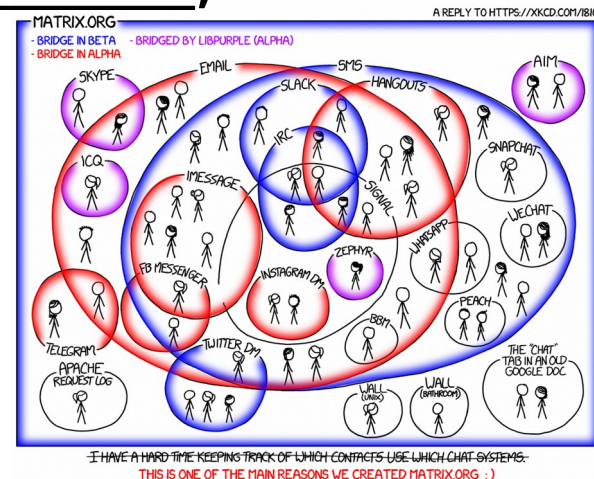


Briar

- Проприетарное



100500 приложух





- Зачем они вообще ?

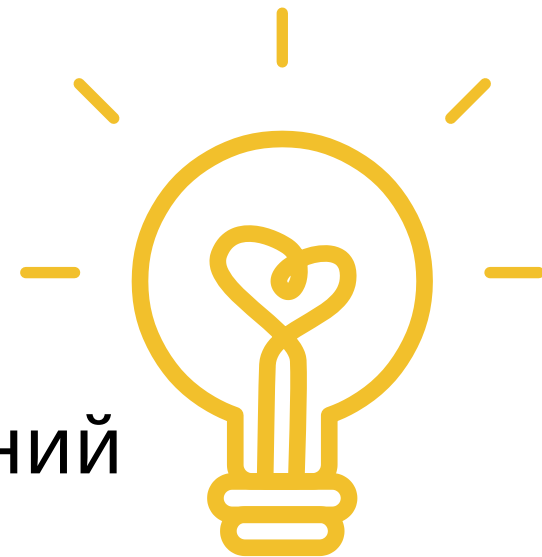
3



- Есть же **SMS** !
 - мало, негибко, безумно дорого. 📠 ✈️
16-82 к₽ / Mb (только по РФ) ⚠️
 - медиа не поддерживается (MMS мёртв)



- Есть же **E-Mail** !
 - неудобно для реального времени
 - ⚠️ - неудобно при множестве сообщений





Мессенджер
от компании
на букву **G** ?



Killed by Google

messagi

Services (211)



2016 - 2022

Service

Google Duo

Killed almost 3 years ago, Google Duo was a video calling app that allowed people to call someone from their contact list. It was almost 6 years old.



2013 - 2022

Service

Google Hangouts

Killed over 2 years ago, Google Hangouts was a cross-platform instant messaging service. It was over 9 years old.



2017 - 2019

Service

YouTube Messages

Killed over 5 years ago, YouTube Messages was a direct messaging feature that allowed users to share and discuss videos one-on-one and in groups on YouTube. It was about 2 years old.



2012 - 2019

Service

Google Cloud Messaging (GCM)

Killed almost 6 years ago, Google Cloud Messaging (GCM) was a notification service that enabled developers to send messages between servers and client apps running on Android or Chrome. It was almost 7 years old.



2016 - 2017

Service

Google Spaces

Killed about 8 years ago, Google Spaces was an app for group discussions and messaging. It was 9 months old.



2005 - 2013

Service

Google Talk

Killed almost 12 years ago, Often remembered as 'Gchat', Google Talk was a messaging service for both text and voice using XMPP. It was over 7 years old.



2005 - 2012

Service

Meebo

Killed almost 13 years ago, Meebo was a browser-based instant messaging application which supported multiple IM services. It was almost 7 years old.



2010 - 2011

Service

Google Buzz

Killed over 13 years ago, Google Buzz was a social networking, microblogging and messaging tool that integrated with Gmail. It was almost 2 years old.



2011 - 2019

Service

Hangouts on Air

Killed almost 6 years ago, Hangouts on Air allowed users to host a multi-user video call while recording and streaming the call on YouTube. It was almost 8 years old.





<https://killedbymicrosoft.info>

Мессенджер от компании на букву М ?



Killed by Microsoft

messag

All (184)

- Apps (86)

- Services (70)

- OS (11)

- Hardware (17)



October
2025

Skype for Business

Vanishing in 5 months, Skype for Business (formerly Microsoft Lync and Office Communicator) is an enterprise instant messaging software developed by Microsoft as part of the Microsoft Office suite. It will be almost 18 years old.



2016 - 2023

Microsoft Kaizala

Killed over 1 year ago, Microsoft Kaizala was a secure messaging and work management software application for collaboration among users inside and outside of organizations, including the ability to send and receive instant messages, coordinate tasks, and submit invoices. It was over 7 years old.



2016 - 2019

Zo

Killed about 6 years ago, Zo was an English chatbot for the principal social networks and messaging apps, born from the experience gained from previous chatbots such as Tay and Xiaoice. It was about 2 years old.



2008 - 2017

Microsoft Essentials

Killed over 8 years ago, Windows Essentials (formerly Windows Live Essentials and Windows Live Installer) is a discontinued suite of freeware applications that includes email, instant messaging, photo sharing, blogging, and parental control software and it was part of Live brand. It was over 8 years old.



2014 - 2014

Acompli

Killed over 10 years ago, Acompli was a mobile app that allowed for user interaction with email messages, calendars and cloud files of multiple accounts in one app launched in April 2014 and then acquired by Microsoft in December 2014. It was 8 months old.



1999 - 2013

MSN Messenger

Killed about 12 years ago, MSN Messenger (later rebranded as Windows Live Messenger) was a cross-platform instant messaging client. It was over 13 years old.



Skype

май 2025 г.



To be killed by Microsoft in 1 day, Skype is a telecommunications application that provided videotelephony, voice calls, and instant messaging.



2001 - 2008

Windows Messenger

Killed over 17 years ago, Windows Messenger was an instant messaging client included in Windows XP and designed for both corporate and home users. It was about 7 years old.



2005 - 2017

Stand-alone phones for Skype

Killed almost 8 years ago, Skype landline phones, cordless DECT phones, and analog telephone adapters (ATA) were phones to use skype network and account without the need of a PC or a smartphone. It was almost 12 years old.



Что нужно для живучести ?



- Стандарт для совместимости
- Открытость кода и архитектуры
- Независимость от \$CompanyName
- Возможность поднять свой сервер
- *Федеративность*
- *Безопасность (E2E)*





- **P2P**

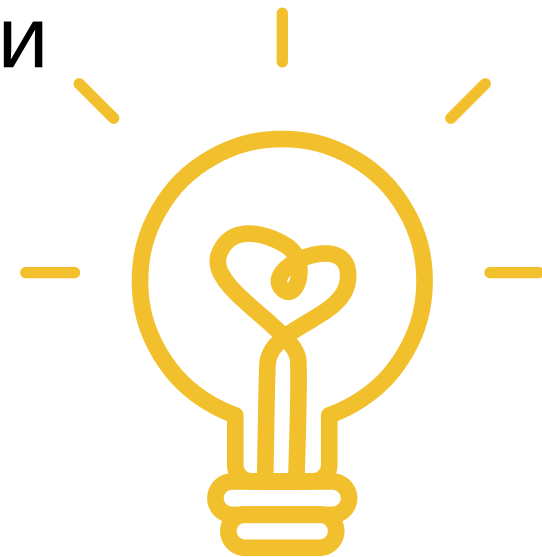


- очень сложные адреса (tor-names, tox-id), по сути открытые ключи AS IS
- сложности с групповыми чатами
- сложности с мультилогингом

- Федеративность **DNS-based**

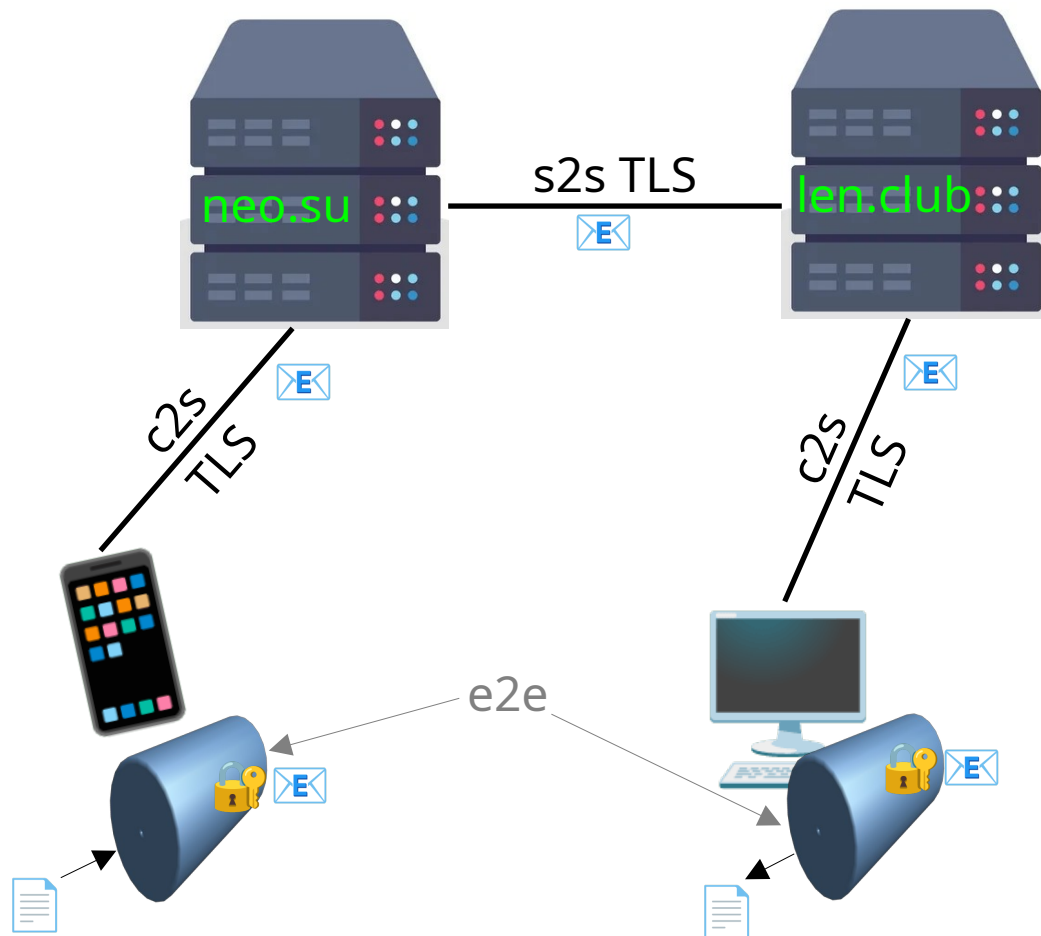


- username@domain.ltd





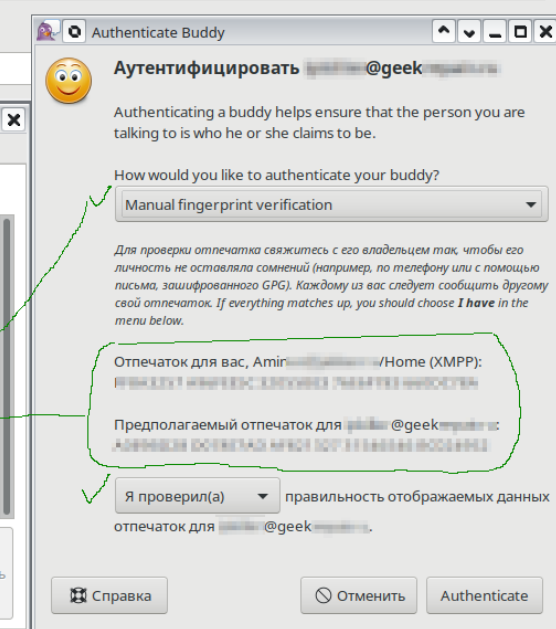
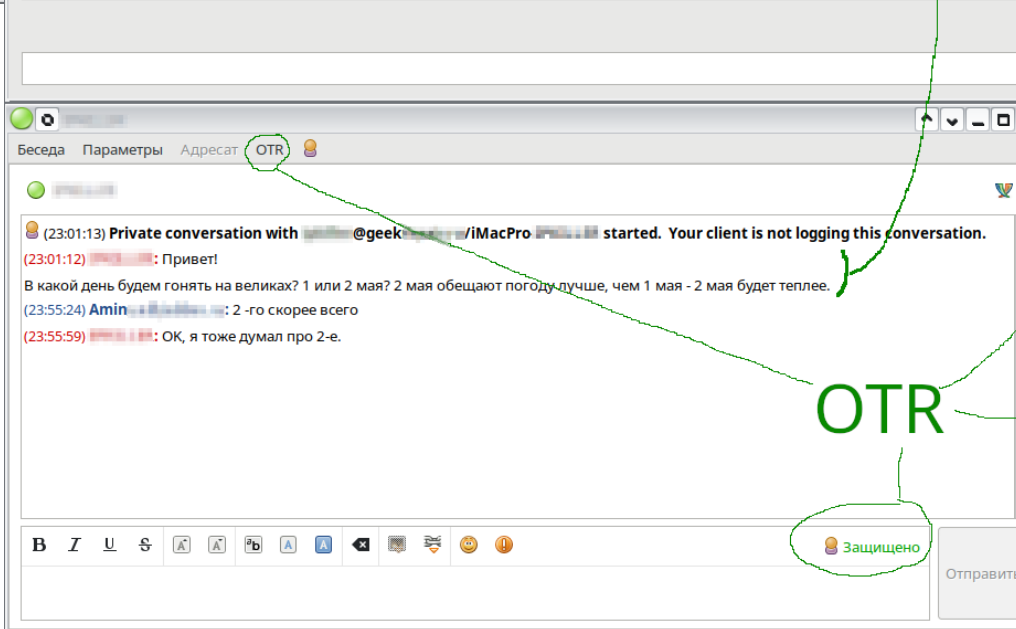
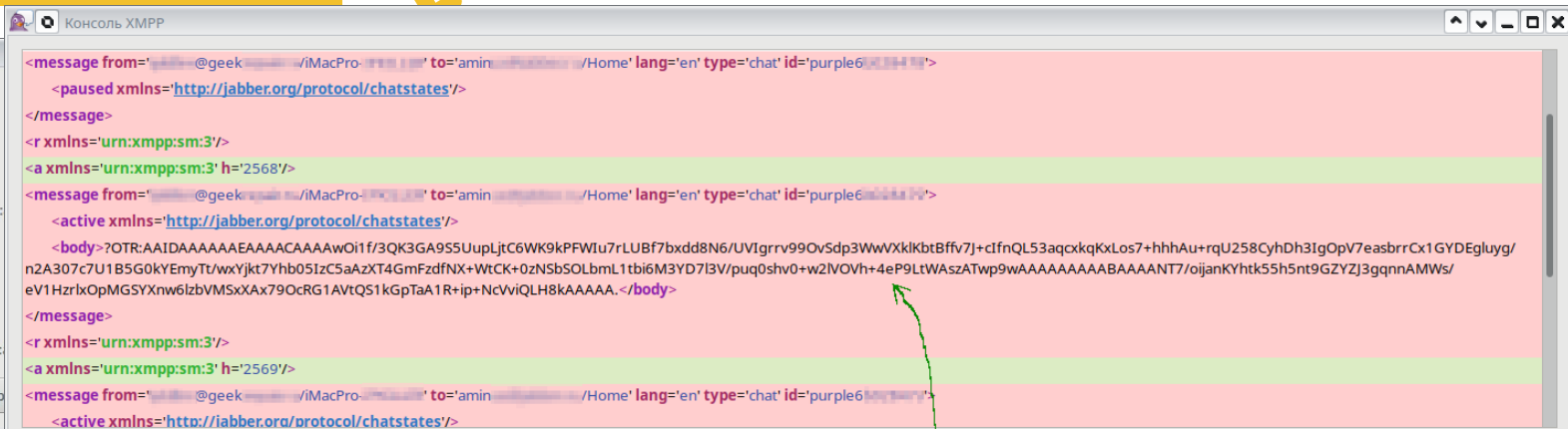
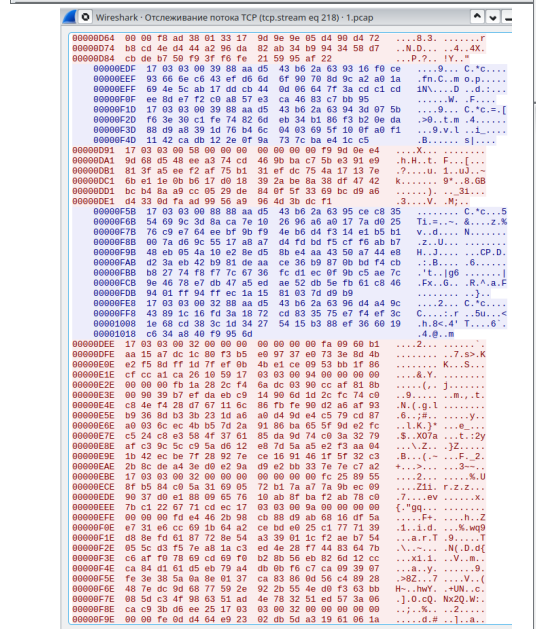
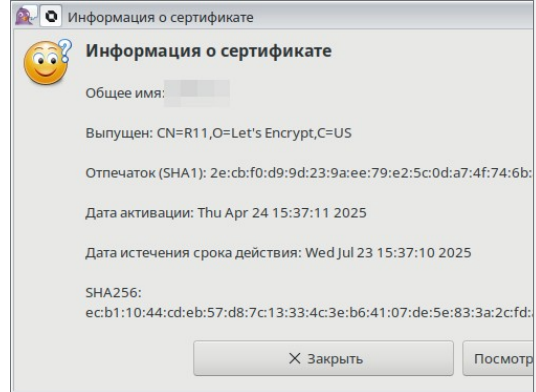
- $c2s / s2s = \text{TLS}$
- $e2e = \text{OTR}$
! ручная сверка ключей





TLS := OTR

9



OTR

Защищено



Основы сервера Matrix

Логины : @user:neo.su
Комнаты: #room:neo.su

DNS:

```
neo.su      A      .10
matrix      A      .20
mail        MX     .30
_matrix._tcp.neo.su. SRV 8448 matrix.neo.su.
```

домен:

neo.su

матрикс:

matrix.neo.su

почта:

mail.neo.su

10

neo.su

Web (nginx): LISTEN: 0.0.0.0:80,443

```
location = /.well-known/matrix/server {
    return 200 '{"m.server": "matrix.neo.su:8448"}';
    default_type application/json;
    add_header Access-Control-Allow-Origin *;
}

location = /.well-known/matrix/client {
    return 200 '{"m.homeserver": {"base_url": "https://matrix.neo.su/"},"';
    default_type application/json;
    add_header Access-Control-Allow-Origin *;
}
```



Web (nginx): LISTEN: 0.0.0.0:80,443,8448
Matrix: LISTEN: 127.0.0.1:8008

```
server {
    listen 8448 ssl;
    server_name matrix.neo.su;
    location / {
        proxy_pass http://localhost:8008;
        proxy_set_header X-Forwarded-For $remote_addr;
    }
}

server {
    server_name _;
    listen 443 ssl default_server;
    location ~ ^(_matrix|_synapse/client) {
        proxy_pass http://127.0.0.1:8008;
        proxy_set_header X-Forwarded-For $remote_addr;
        proxy_set_header X-Forwarded-Proto $scheme;
        proxy_set_header Host $host;
        client_max_body_size 10M;
        proxy_http_version 1.1;
    }
}
```



Настройка сервера Matrix



```
# /etc/matrix-synapse/homeserver.yaml
```

```
server_name: neo.su
```

```
listeners:
```

```
- port: 8008
  tls: false
  type: http
  x_forwarded: true
  bind_addresses: ['::1', '127.0.0.1']
  resources:
    - names: [client, federation]
      compress: false
```

```
no_tls: true
```

```
database:
```

```
name: psycopg2
```

```
args:
```

```
user: matrix
password: PgSQL_SuperPaSSw0rd
database: matrix
host: localhost
```

```
media_store_path: /var/lib/matrix-synapse/media
```

```
trusted_key_servers:
```

```
- server_name: "matrix.neo.su"
- server_name: "neo.su"
```

Chat + Media-inline + Files + Voice/Video Calls

Matrix: LISTEN: 127.0.0.1:8008 [NO SSL/TLS !!]

```
# apt install matrix-synapse-py3 coturn postgresql
```

```
# /etc/matrix-synapse/conf.d/server_name.yaml
```

```
server_name: neo.su
```

```
# /etc/matrix-synapse/conf.d/options.yaml
```

```
turn_uris: ["turn:matrix.neo.su?transport=udp", "turn:matrix.neo.su?transport=tcp"]
```

```
turn_shared_secret: "long_random_secret_text_1"
```

```
turn_user_lifetime: "1h"
```

```
turn_allow_guests: true
```

```
enable_registration: false
```

```
macaroon_secret_key: "long_random_secret_text_2"
```

```
registration_shared_secret: "long_random_secret_text_3"
```

```
matrix_synapse_federation_enabled: true
```

```
matrix_synapse_federation_port_enabled: true
```

```
matrix_federation_public_port: 443
```

```
# /etc/turnserver.conf
```

```
static-auth-secret=long_random_secret_text_1
```

```
server-name=matrix.neo.su
```

```
realm=matrix.neo.su
```

```
cert=/etc/letsencrypt/.../matrix.neo.su.crt
```

```
pkey=/etc/letsencrypt/.../matrix.neo.su.key
```



```
# cat /proc/cpuinfo [2x vCPU]
... Xeon E3-1231 v3 @ 3.40GHz
```

```
# free -mh
      total        used        free      shared    avail
Mem:   2.0Gi  433Mi   52Mi       32Mi   1.6Gi
Swap:  512Mi   29Mi   482Mi
```

```
# uptime
... load average: 0.61, 0.64, 0.63
```

```
# netstat -nlp
tcp    0.0.0.0:443      nginx
tcp    0.0.0.0:80      nginx
tcp    0.0.0.0:8448     nginx
tcp    127.0.0.1:8008  python
tcp    127.0.0.1:5432 postgres
tcp    <Ext-IP>:3478 turnserver
udp    <Ext-IP>:3478 turnserver
```

```
# pstree -u -G -T
systemd--3*[agetty]
      |--nginx--2*[nginx(www-data)]
      |--postgres(postgres)...
      |--python(matrix-synapse)
      |--turnserver(turnserver)
      --sshd ...
```

```
# cat /etc/os-release
PRETTY_NAME="Ubuntu 24.04.2 LTS"
```

```
# df -h -t ext4
Filesystem      Size  Used Avail Use% Mounted on
/dev/loop0      3.9G  1.9G   1.9G   50% /
/dev/loop1      7.8G   44M   7.4G    1% /var/lib/matrix-synapse/media
```

```
# systemctl status matrix-synapse
# systemctl status coturn
```

```
# tail -f /var/log/matrix-synapse/homeserver.log
```

Добавление пользователя:

```
# cd /opt/venvs/matrix-synapse/bin/
# register_new_matrix_user -c /etc/matrix-synapse/conf.d/options.yaml http://localhost:8008
```

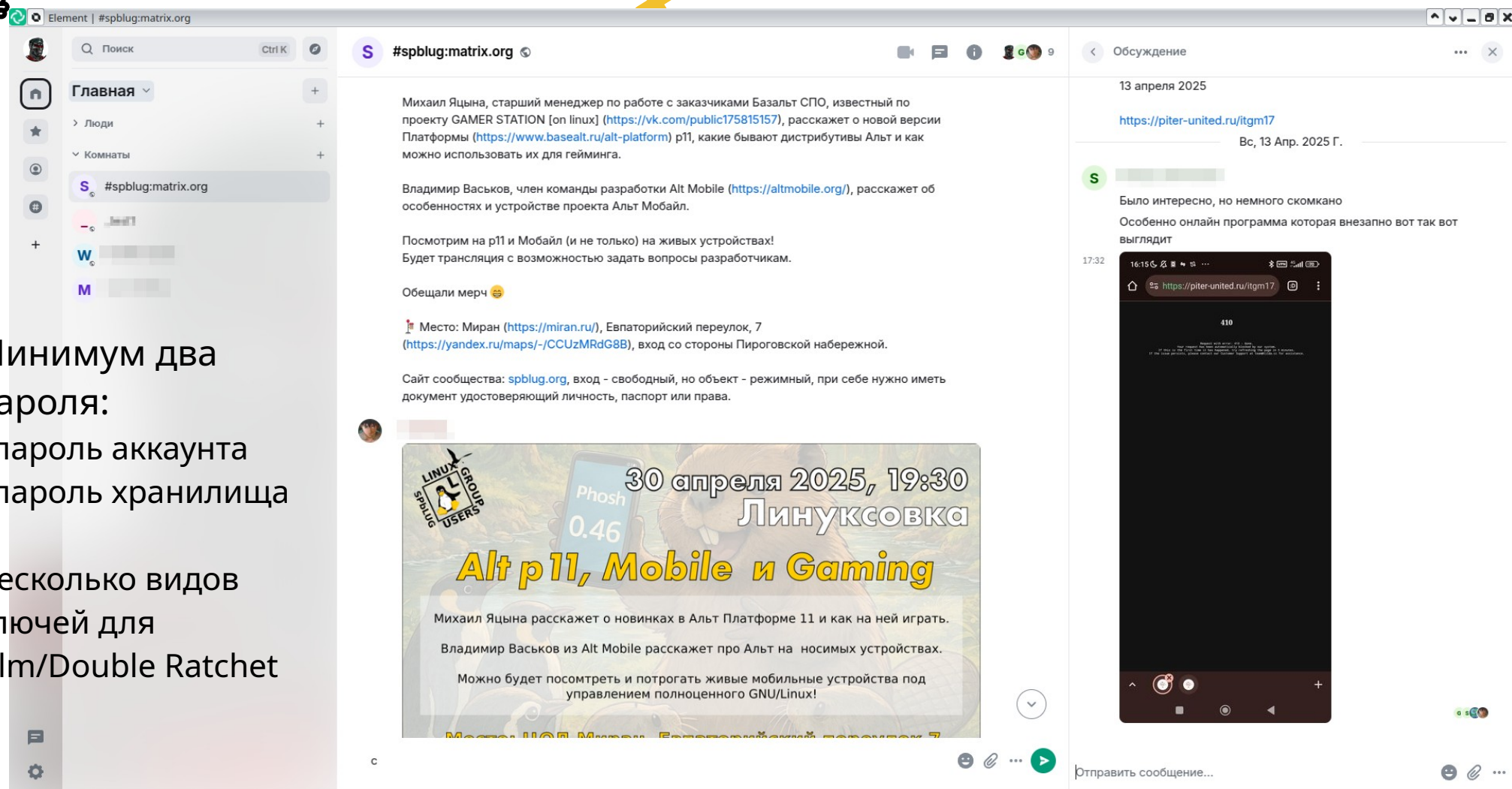
Сброс пароля:

```
# hash_password -c /etc/matrix-synapse/conf.d/options.yaml
$2b$12$tM9b.50u0qJcEgu0y2FYouQGcVg3nfWpKWvuLHSjZlswGT/TkDEh0

# su - postgres -c "psql"
postgres=# \c matrix
matrix=# select name from users where name = '@user:neo.su';
matrix=# UPDATE users SET password_hash = '$2b$12...h0' WHERE name='@user:neo.su';
```

Размеры таблиц в БД:

```
matrix=# select table_name,
pg_size_pretty(pg_total_relation_size(quote_ident(table_name))),
pg_total_relation_size(quote_ident(table_name))
from information_schema.tables where table_schema = 'public' order by 3 desc;
```





- Свой self-hosted WEB-UI



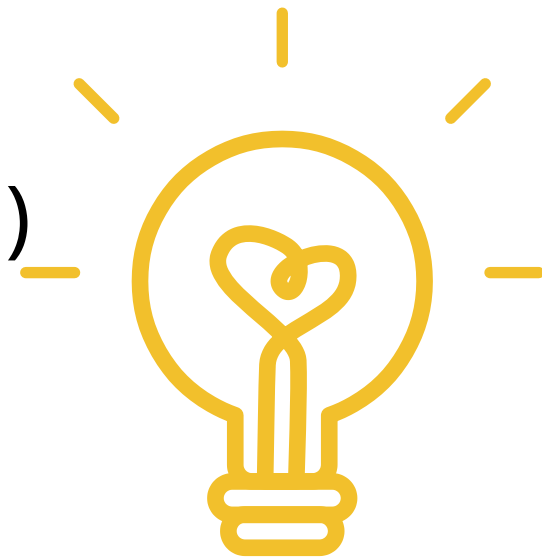
<https://github.com/element-hq/element-web>



→ # [/var/www/html/element](#)

- Web-UI для Postgres (нужен php !)

<https://www.adminer.org/>





- Где ещё почитать ?



- <https://matrix.org/>
- <https://byzoni.org/posts/how-to-install-matrix-synapse-on-ubuntu-24-04/> +
- <https://tavda.net/matrix>
- <https://federationtester.matrix.org/> ◀
- <https://levans.fr/shrink-synapse-database.html>
- <https://habr.com/ru/articles/739814/>
- <https://ruitunion.org/posts/2022-05-14-matrix/>



Вопросы ?

