

MLM COMMUNITY

SUPABASE – ПОЛНАЯ АРХИТЕКТУРА БД

v5.1 FINAL | 44 таблицы | 19 Edge Functions | RLS | Storage | Realtime

Часть комплекта: 1. MLM_TZ_v5.1.pdf 2. MLM_SUPABASE.pdf (ЭТОТ) 3. MLM_ADMIN.pdf 4. MLM_PLATFORM.pdf

Обновлено в v5.1 (мультиплатформа):

- users: +email, +auth_provider, +supabase_auth_id; telegram_id NULLABLE
- user_settings: +push_telegram, +push_web, +push_native
- НОВАЯ таблица: push_subscriptions | НОВАЯ таблица: alliance_promotions
- +3 Edge Functions: auth-telegram-oauth, auth-email, register-push-sub
- send-push: 3 канала | Vault: +VAPID, +FCM | Итого: 44 табл., 19 EF

МОДУЛЬ 1: ЯДРО ПОЛЬЗОВАТЕЛЕЙ

users

ОБНОВЛЕНО v5.1: +email, +auth_provider, +supabase_auth_id. telegram_id NULLABLE.

id	uuid	PRIMARY KEY DEFAULT gen_random_uuid()
telegram_id	bigint	UNIQUE -- HOBOE v5.1: теперь NULLABLE
telegram_username	text	
email	text	UNIQUE -- HOBOE v5.1
auth_provider	text	DEFAULT 'telegram' -- HOBOE v5.1
		CHECK (auth_provider IN ('telegram','telegram_oauth','email'))
supabase_auth_id	uuid	UNIQUE -- HOBOE v5.1 (для email auth)
name	text	NOT NULL
avatar_url	text	
bio	text	
dna_type	text	CHECK (dna_type IN ('strategist','communicator','creator','analyst'))
dna_profile	jsonb	DEFAULT '{}' -- {strategist:55, analyst:25, communicator:15, creator:5}
level	text	DEFAULT 'pawn' CHECK (level IN ('pawn','knight','bishop','rook','queen','king'))
level_stars	smallint	DEFAULT 0 CHECK (level_stars BETWEEN 0 AND 5)
xp_total	bigint	DEFAULT 0 -- никогда не уменьшается, определяет уровень
balance	bigint	DEFAULT 0 -- в копейках (рубли для вывода/транзакций)
xp_balance	bigint	DEFAULT 0 -- XP доступные для начисления на balance
tariff	text	DEFAULT 'free' CHECK (tariff IN ('free','pro','business','academy'))
streak_days	int	DEFAULT 0
streak_last_date	date	
referral_code	text	UNIQUE NOT NULL
referred_by	uuid	REFERENCES users(id)
is_verified	boolean	DEFAULT false
verification_level	smallint	DEFAULT 0 -- 0=нет, 1=паспорт, 2=премиум
is_banned	boolean	DEFAULT false
ban_reason	text	
strikes_count	smallint	DEFAULT 0
company_id	uuid	REFERENCES companies(id)
specialization	text[]	DEFAULT '{}'
last_active_at	timestamptz	
created_at	timestamptz	DEFAULT now()

INDEXES: idx_users_telegram_id (telegram_id), idx_users_email (email), idx_users_supabase_auth_id (supabase_auth_id), idx_users_referral_code (referral_code), idx_users_level (level, level_stars), idx_users_tariff (tariff), idx_users_dna_type (dna_type), idx_users_created_at (created_at), idx_users_referred_by (referred_by), idx_users_last_active (last_active_at)

RLS: SELECT: authenticated -> true. UPDATE: auth.uid() = id. INSERT: через Edge Function. DELETE: никогда.

user_settings

ОБНОВЛЕНО v5.1: +push_telegram, +push_web, +push_native

id	uuid	PRIMARY KEY DEFAULT gen_random_uuid()
user_id	uuid	UNIQUE REFERENCES users(id) ON DELETE CASCADE
push_money	boolean	DEFAULT true
push_social	boolean	DEFAULT true
push_deals	boolean	DEFAULT true
push_progress	boolean	DEFAULT true
push_system	boolean	DEFAULT true
push_telegram	boolean	DEFAULT true -- HOBOE v5.1
push_web	boolean	DEFAULT true -- HOBOE v5.1
push_native	boolean	DEFAULT true -- HOBOE v5.1
quiet_hours_from	time	DEFAULT '23:00'
quiet_hours_to	time	DEFAULT '07:00'
language	text	DEFAULT 'ru'
sound_enabled	boolean	DEFAULT true
two_factor	boolean	DEFAULT false

RLS: только свой (auth.uid() = user_id)

push_subscriptions (HOBOE v5.1)

НОВАЯ ТАБЛИЦА: Web Push / FCM подписки для Android/iOS/Web

id	uuid	PRIMARY KEY DEFAULT gen_random_uuid()
user_id	uuid	REFERENCES users(id) ON DELETE CASCADE
platform	text	NOT NULL CHECK (platform IN ('web','android','ios'))
endpoint	text	-- Web Push endpoint URL
p256dh	text	-- Web Push: ключ шифрования
auth_key	text	-- Web Push: auth secret
fcm_token	text	-- FCM token (Android/iOS native)
is_active	boolean	DEFAULT true
created_at	timestamptz	DEFAULT now()
updated_at	timestamptz	DEFAULT now()

RLS: INSERT/UPDATE/DELETE — свой. SELECT — свой + service_role.

user_stats

```

id          uuid      PRIMARY KEY DEFAULT gen_random_uuid()
user_id     uuid      UNIQUE REFERENCES users(id) ON DELETE CASCADE
tasks_completed int      DEFAULT 0
tasks_failed   int      DEFAULT 0
deals_completed int      DEFAULT 0
deals_as_client int      DEFAULT 0
deals_as_executor int     DEFAULT 0
referrals_count int      DEFAULT 0
referrals_verified int     DEFAULT 0
products_sold   int      DEFAULT 0
products_bought int      DEFAULT 0
forum_topics    int      DEFAULT 0
forum_replies   int      DEFAULT 0
total_earned    bigint   DEFAULT 0 -- копейки
total_withdrawn bigint   DEFAULT 0
month_xp       bigint   DEFAULT 0
month_earned    bigint   DEFAULT 0
month_tasks     int      DEFAULT 0
avg_rating     decimal(3,2) DEFAULT 0
rating_count    int      DEFAULT 0

```

RLS: SELECT — все (публичная). UPDATE — через Edge Function.

social_links

```

id          uuid      PRIMARY KEY
user_id     uuid      REFERENCES users(id) ON DELETE CASCADE
platform    text      NOT NULL CHECK (platform IN
                    ('telegram','instagram','vk','youtube','tiktok','facebook','whatsapp'))
url         text      NOT NULL
username    text
is_verified boolean  DEFAULT false
xp_awarded  boolean  DEFAULT false -- начислен ли бонус XP
created_at  timestampz DEFAULT now()

UNIQUE(user_id, platform)

```

RLS: свой — CRUD, чужой — только SELECT

МОДУЛЬ 2: КОНТЕНТ

posts

id	uuid	PRIMARY KEY
author_id	uuid	REFERENCES users(id) ON DELETE CASCADE
type	text	DEFAULT 'post' CHECK (type IN ('post','case','news','ad'))
content	text	NOT NULL
media_urls	text[]	DEFAULT '{}'
likes_count	int	DEFAULT 0
comments_count	int	DEFAULT 0
is_verified	boolean	DEFAULT false -- для кейсов
is_pinned	boolean	DEFAULT false
is_moderated	boolean	DEFAULT false
moderation_status	text	DEFAULT 'pending' CHECK (... IN ('pending','approved','rejected'))
created_at	timestamptz	DEFAULT now()

INDEXES: author_id, created_at DESC, type. RLS: SELECT approved, INSERT auth, UPDATE/DELETE автор

comments

id	uuid	PRIMARY KEY
post_id	uuid	REFERENCES posts(id) ON DELETE CASCADE
author_id	uuid	REFERENCES users(id) ON DELETE CASCADE
parent_id	uuid	REFERENCES comments(id) -- для ответов на комменты
content	text	NOT NULL CHECK (length(content) >= 5)
likes_count	int	DEFAULT 0
created_at	timestamptz	DEFAULT now()

INDEX: idx_comments_post ON (post_id, created_at)

reactions

id	uuid	PRIMARY KEY
user_id	uuid	REFERENCES users(id) ON DELETE CASCADE
target_type	text	NOT NULL CHECK (... IN ('post','comment','forum_reply'))
target_id	uuid	NOT NULL
reaction_type	text	DEFAULT 'like' CHECK (... IN ('like','heart','fire','clap'))
created_at	timestamptz	DEFAULT now()

UNIQUE(user_id, target_type, target_id) -- один реакт на объект

МОДУЛЬ 3: КОМПАНИИ И ЭКСПЕРТЫ

companies

id	uuid	PRIMARY KEY
creator_id	uuid	REFERENCES users(id)
name	text	NOT NULL
logo_url	text	
category	text	
description	text	
directions	text[]	DEFAULT '{}' -- направления
countries	text[]	DEFAULT '{}'
website_url	text	
members_count	int	DEFAULT 0
experts_count	int	DEFAULT 0
avg_rating	decimal(3,2)	DEFAULT 0
is_verified	boolean	DEFAULT false
moderation_status	text	DEFAULT 'pending'
created_at	timestamptz	DEFAULT now()

expert_cards

id	uuid	PRIMARY KEY
user_id	uuid	UNIQUE REFERENCES users(id) ON DELETE CASCADE
title	text	NOT NULL -- "SMM-специалист", "Наставник NL"
specializations	text[]	NOT NULL -- до 3
about	text	
experience_years	smallint	
legal_status	text	-- ИП, самозанятый, физлицо
portfolio_pdfs	text[]	DEFAULT '{}' -- до 3 URL
portfolio_links	jsonb	DEFAULT '[]' -- [{title, url, description}] до 5
price_from	int	-- мин. цена услуг (копейки)
price_to	int	
skills	text[]	DEFAULT '{}'
skill_tree	jsonb	DEFAULT '{}' -- дерево навыков
rating	decimal(3,2)	DEFAULT 0
reviews_count	int	DEFAULT 0
deals_completed	int	DEFAULT 0
team_members	uuid[]	DEFAULT '{}' -- команда экспертов
connectivity_score	decimal(5,2)	DEFAULT 0
moderation_status	text	DEFAULT 'pending'
is_active	boolean	DEFAULT true
created_at	timestamptz	DEFAULT now()

INDEX: GIN (specializations), rating DESC

orders

```
id          uuid      PRIMARY KEY
author_id   uuid      REFERENCES users(id)
title       text      NOT NULL
description text      NOT NULL
category    text
budget_min  int       -- копейки
budget_max  int
deadline    date
required_level text     DEFAULT 'knight'
required_skills text[]   DEFAULT '{}'
responses_count int      DEFAULT 0
status      text      DEFAULT 'open' CHECK (... IN ('open','in_progress','completed','cancelled'))
created_at  timestampz DEFAULT now()
```

order_responses

```
id          uuid      PRIMARY KEY
order_id   uuid      REFERENCES orders(id) ON DELETE CASCADE
expert_id   uuid      REFERENCES users(id)
proposal    text      NOT NULL
price       int       NOT NULL -- копейки
estimated_days smallint
status      text      DEFAULT 'pending'
created_at  timestampz DEFAULT now()
```

UNIQUE(order_id, expert_id)

МОДУЛЬ 4: МАГАЗИН

products

```

id          uuid      PRIMARY KEY
seller_id   uuid      REFERENCES users(id)
title       text      NOT NULL
description text
type        text      CHECK (... IN ('guide','template','course','service','tool'))
price       int       NOT NULL --копейки
cover_url   text
file_url    text      -- для цифровых товаров
preview_url text      -- З страницы бесплатно
dna_match   text[]    DEFAULT '{}' -- для каких ДНК-типов
level_min   text      DEFAULT 'pawn'
rating      decimal(3,2) DEFAULT 0
reviews_count int      DEFAULT 0
sales_count  int      DEFAULT 0
is_active   boolean   DEFAULT true
moderation_status text    DEFAULT 'pending'
created_at   timestampz DEFAULT now()

```

purchases

```

id          uuid      PRIMARY KEY
buyer_id   uuid      REFERENCES users(id)
product_id uuid      REFERENCES products(id)
price_paid  int       NOT NULL
platform_fee int      NOT NULL -- комиссия платформы
seller_received int     NOT NULL
created_at   timestampz DEFAULT now()

```

UNIQUE(buyer_id, product_id) -- один раз купить

reviews

```

id          uuid      PRIMARY KEY
author_id   uuid      REFERENCES users(id)
target_type  text      NOT NULL CHECK (... IN ('product','deal','expert','webinar'))
target_id   uuid      NOT NULL
rating      smallint  NOT NULL CHECK (rating BETWEEN 1 AND 5)
text        text
xp_awarded  boolean   DEFAULT false
created_at   timestampz DEFAULT now()

```

UNIQUE(author_id, target_type, target_id)

МОДУЛЬ 5: КОММУНИКАЦИЯ

conversations

```

id          uuid      PRIMARY KEY
type        text      NOT NULL CHECK (... IN ('personal','group','deal'))
title       text      -- для групповых
deal_id    uuid      REFERENCES deals(id) -- если чат сделки
last_message_at timestampz
created_at   timestampz DEFAULT now()

```

conversation_members

```

id          uuid      PRIMARY KEY
conversation_id  uuid      REFERENCES conversations(id) ON DELETE CASCADE
user_id       uuid      REFERENCES users(id)
is_pinned     boolean   DEFAULT false
is_muted      boolean   DEFAULT false
unread_count  int       DEFAULT 0
joined_at    timestampz DEFAULT now()

```

UNIQUE(conversation_id, user_id)

RLS: SELECT/UPDATE только для участников

messages

```

id          uuid      PRIMARY KEY
conversation_id  uuid      REFERENCES conversations(id) ON DELETE CASCADE
sender_id     uuid      REFERENCES users(id)
content       text
type         text      DEFAULT 'text' CHECK (... IN ('text','file','system','deal_action'))
file_url     text
reply_to_id   uuid      REFERENCES messages(id)
is_read      boolean   DEFAULT false
created_at   timestampz DEFAULT now()

```

INDEX: (conversation_id, created_at DESC). RLS: участники. REALTIME: ON

forum_topics

```
id          uuid      PRIMARY KEY
author_id   uuid      REFERENCES users(id)
title       text      NOT NULL
content     text      NOT NULL
category    text      NOT NULL CHECK (... IN
  ('business','marketing','tools','education','newbies','cases','offtopic'))
is_pinned   boolean   DEFAULT false
is_solved   boolean   DEFAULT false
best_reply_id  uuid
replies_count int      DEFAULT 0
views_count  int      DEFAULT 0
created_at   timestampz DEFAULT now()
```

forum_replies

```
id          uuid      PRIMARY KEY
topic_id    uuid      REFERENCES forum_topics(id) ON DELETE CASCADE
author_id   uuid      REFERENCES users(id)
content     text      NOT NULL
is_best     boolean   DEFAULT false
likes_count int      DEFAULT 0
created_at   timestampz DEFAULT now()
```

friends

```
id          uuid      PRIMARY KEY
user_a_id   uuid      REFERENCES users(id)
user_b_id   uuid      REFERENCES users(id)
status      text      DEFAULT 'pending' CHECK (... IN ('pending','accepted','blocked'))
compatibility_score decimal(5,2) DEFAULT 0
created_at   timestampz DEFAULT now()

UNIQUE(user_a_id, user_b_id)
```

МОДУЛЬ 6: СДЕЛКИ

deals

```

id          uuid      PRIMARY KEY
client_id   uuid      REFERENCES users(id) NOT NULL
executor_id uuid      REFERENCES users(id) NOT NULL
conversation_id  uuid  REFERENCES conversations(id)
title        text      NOT NULL
description  text
total        int       NOT NULL -- копейки (полная сумма)
prepayment   int       NOT NULL -- 50% -> исполнителю
escrow       int       NOT NULL -- 50% -> платформа держит
platform_fee int       NOT NULL -- 20% от total
deadline     date
revision_count smallint DEFAULT 0
max_revisions smallint DEFAULT 3
status        text      DEFAULT 'pending' CHECK (... IN
    ('pending','accepted','paid','in_progress','submitted',
     'revision','completed','disputed','cancelled'))
submitted_at  timestamp
completed_at  timestamp
created_at    timestamp DEFAULT now()

```

INDEXES: status, client_id, executor_id. RLS: только client и executor.

deal_milestones

```

id          uuid      PRIMARY KEY
deal_id     uuid      REFERENCES deals(id) ON DELETE CASCADE
executor_id uuid      REFERENCES users(id) -- для групповых сделок
title        text
amount      int       -- доля исполнителя (копейки)
status       text      DEFAULT 'pending'
created_at  timestamp DEFAULT now()

```

МОДУЛЬ 7: ФИНАНСЫ

transactions

```

id          uuid      PRIMARY KEY
user_id     uuid      REFERENCES users(id) NOT NULL
type        text      NOT NULL CHECK (... IN
    ('task_reward','referral_bonus','referral_monthly','deal_prepayment','deal_final',
     'deal_fee','product_sale','product_purchase','subscription','withdrawal',
     'contest_entry','contest_prize','deposit','xp_conversion','streak_bonus',
     'onboarding_bonus','social_link_bonus','review_bonus','penalty'))
amount      bigint   NOT NULL -- копейки (+/-)
xp_amount   bigint   DEFAULT 0 -- XP (+/-)
balance_after bigint   NOT NULL -- баланс после операции
xp_after    bigint   NOT NULL -- XP после операции
reference_type text    -- 'task','deal','product','subscription','withdrawal','raffle'
reference_id  uuid
description  text
created_at   timestamp DEFAULT now()

```

INDEXES: (user_id, created_at DESC), type, created_at DESC. RLS: только свои.

referrals

```

id          uuid      PRIMARY KEY
referrer_id uuid      REFERENCES users(id) NOT NULL
referred_id  uuid      UNIQUE REFERENCES users(id) NOT NULL
bonus_xp    bigint   DEFAULT 0 -- разовый бонус
bonus_frozen boolean  DEFAULT true -- заморозка 7 дней
bonus_expires_at timestamp -- дата сгорания заморозки
monthly_rate decimal(4,2) DEFAULT 15.00 -- %
is_active   boolean  DEFAULT true
created_at   timestamp DEFAULT now()

```

INDEX: idx_referrals_referrer ON (referrer_id)

subscriptions

```

id          uuid      PRIMARY KEY
user_id     uuid      REFERENCES users(id) NOT NULL
tariff      text      NOT NULL
price       int       NOT NULL -- копейки
payment_method text    -- tribute/stars/crypto
is_trial    boolean  DEFAULT false
is_active   boolean  DEFAULT true
auto_renew   boolean  DEFAULT true
starts_at   timestamp DEFAULT now()
expires_at   timestamp NOT NULL
cancelled_at timestamp
created_at   timestamp DEFAULT now()

```

INDEXES: user_id, (expires_at) WHERE is_active = true

withdrawals

```
id          uuid      PRIMARY KEY
user_id     uuid      REFERENCES users(id) NOT NULL
amount      int       NOT NULL -- копейки (до комиссии)
fee         int       NOT NULL -- комиссия
net_amount   int       NOT NULL -- к выплате
method      text      NOT NULL CHECK (... IN ('card','yoomoney','crypto_trc20'))
requisites_encrypted text      NOT NULL -- зашифрованные реквизиты (AES-256)
status      text      DEFAULT 'pending' CHECK (... IN
('pending','processing','completed','rejected'))
rejection_reason text
admin_id    uuid      REFERENCES admin_users(id) -- кто одобрил
created_at   timestampz DEFAULT now()
processed_at timestampz
```

МОДУЛЬ 8: ЗАДАНИЯ И ГЕЙМИФИКАЦИЯ

tasks

```

id          uuid      PRIMARY KEY
type        text      NOT NULL CHECK (... IN ('platform','ad','business'))
title       text      NOT NULL
description text      NOT NULL
example_text text      -- пример выполнения
action_type text      -- 'rate_profiles','fill_section','repost','comment','video','custom'
reward_xp   bigint    NOT NULL
reward_money int      DEFAULT 0 -- копейки (для бизнес-заданий)
level_min   text      DEFAULT 'pawn'
dna_types   text[]    DEFAULT '{}' -- пустой = для всех
required_socials text[]  DEFAULT '{}' -- какие соцсети нужны
timer_minutes int     DEFAULT 60
requires_screenshot boolean DEFAULT true
max_completions int    -- макс. выполнений всего (для рекламных)
completions_count int    DEFAULT 0
max_per_user_day smallint DEFAULT 1
advertiser_id  uuid    REFERENCES users(id) -- для рекламных
ad_campaign_id uuid    REFERENCES ad_campaigns(id)
is_active    boolean   DEFAULT true
created_at   timestampz DEFAULT now()
expires_at   timestampz

```

INDEXES: (type) WHERE is_active, (level_min)

task_completions

```

id          uuid      PRIMARY KEY
task_id     uuid      REFERENCES tasks(id) NOT NULL
user_id     uuid      REFERENCES users(id) NOT NULL
screenshot_url text
status      text      DEFAULT 'pending' CHECK (... IN ('pending','approved','rejected','expired'))
rejection_reason text
verified_by  text      DEFAULT 'auto' -- 'auto' или admin_id
xp_awarded   bigint   DEFAULT 0
taken_at    timestampz DEFAULT now()
submitted_at timestampz
verified_at  timestampz

```

INDEXES: (user_id, taken_at DESC), (status) WHERE pending

ad_campaigns

```

id          uuid      PRIMARY KEY
advertiser_id  uuid    REFERENCES users(id) NOT NULL
post_id      uuid    REFERENCES posts(id)
package       text      NOT NULL CHECK (... IN ('starter','basic','advanced','maximum'))
budget        int      NOT NULL -- копейки
platform_fee  int      NOT NULL -- доля платформы
target_completions int    NOT NULL
actual_completions int    DEFAULT 0
status        text      DEFAULT 'pending' CHECK (... IN ('pending','approved','active','completed','rejected'))
moderation_note text
created_at   timestampz DEFAULT now()

```

achievements

```

id          uuid      PRIMARY KEY
user_id     uuid      REFERENCES users(id) NOT NULL
badge_type   text      NOT NULL -- 'streak_7','streak_21','first_deal','referrals_10',...
badge_name   text      NOT NULL
badge_icon   text      -- SVG или URL
xp_bonus     bigint   DEFAULT 0
earned_at    timestampz DEFAULT now()

```

UNIQUE(user_id, badge_type)

МОДУЛЬ 9: КОНКУРСЫ

contests

```

id          uuid      PRIMARY KEY
category    text      NOT NULL CHECK (... IN ('bronze','silver','gold'))
entry_fee   int      NOT NULL -- копейки
prize_pool  int      DEFAULT 0
platform_fee_pct smallint DEFAULT 20
min_participants int    DEFAULT 50
max_participants int
status      text      DEFAULT 'open' CHECK (... IN ('open','closed','drawing','completed','cancelled'))
entries_count int      DEFAULT 0

```

```
week_number      int      NOT NULL -- ISO week
draw_seed        text      -- seed для генератора (прозрачность)
draw_at          timestamptz
completed_at     timestamptz
created_at       timestamptz DEFAULT now()
```

contest_entries / contest_winners

```
-- contest_entries
id, contest_id REFERENCES contests, user_id REFERENCES users,
multiplier decimal(3,1) DEFAULT 1.0, tasks_completion_pct decimal(5,2), created_at
UNIQUE(contest_id, user_id)

-- contest_winners
id, contest_id, user_id, place int NOT NULL, prize_xp bigint NOT NULL,
prize_money int NOT NULL, paid boolean DEFAULT false, created_at
```

МОДУЛЬ 10: ОБУЧЕНИЕ

courses / lessons / user_courses / certificates

```
-- courses
id, title, profession, description, duration_months smallint,
lessons_count, instructor_id, rating decimal(3,2), enrolled_count, is_active, created_at

-- lessons
id, course_id FK CASCADE, module_number smallint, lesson_number smallint,
title, content_type CHECK ('text','video','quiz','practice'),
content jsonb NOT NULL, duration_minutes smallint, xp_reward bigint, order_index int
INDEX: (course_id, order_index)

-- user_courses
id, user_id, course_id, current_lesson_id, progress_percent decimal(5,2),
started_at, completed_at, certificate_level CHECK ('intern','specialist','pro')
UNIQUE(user_id, course_id)

-- certificates
id, user_id, course_id, level CHECK ('intern','specialist','pro'),
certificate_hash text UNIQUE NOT NULL, issued_at
```

МОДУЛЬ 11: МАТЧИНГ И МЕНТОРСТВО

matches

```
id          uuid      PRIMARY KEY
user_a_id   uuid      REFERENCES users(id) NOT NULL
user_b_id   uuid      REFERENCES users(id) NOT NULL
user_a_action text      CHECK (... IN ('like','pass','superlike'))
user_b_action text      DEFAULT 'pending' CHECK (... IN ('pending','like','pass','superlike'))
compatibility_score decimal(5,2)
compatibility_reasons jsonb    -- {need_offer:35, dna:20, ...}
status       text      DEFAULT 'pending' CHECK (... IN ('pending','matched','expired'))
conversation_id uuid      REFERENCES conversations(id)
created_at   timestampz DEFAULT now()

UNIQUE(user_a_id, user_b_id)
```

mentorships

```
id, mentor_id NOT NULL, mentee_id NOT NULL,
price int (копейки/mec), mentor_share int (80%), platform_fee int (20%),
status CHECK ('pending','active','completed','cancelled'),
conversation_id, started_at, expires_at, renewed_count DEFAULT 0, created_at
```

МОДУЛЬ 12: АЛЬЯНСЫ И ВЕБИНАРЫ

alliances / alliance_promotions / webinars / webinar_registrations

```
-- alliances
id, company_a_id NOT NULL, company_b_id NOT NULL, description,
joint_offers jsonb DEFAULT '[]', status CHECK ('pending','active','dissolved'),
moderation_status, created_at. UNIQUE(company_a_id, company_b_id)

-- alliance_promotions (HOBIE v5.1)
id, alliance_id FK, title, budget int, tasks_count, created_at

-- webinars
id, speaker_id NOT NULL, title, description, category, scheduled_at timestampz,
duration_minutes DEFAULT 60, stream_url, recording_url,
status CHECK ('scheduled','live','completed','cancelled'),
promotion_tier CHECK ('free','basic','maximum'), promotion_budget, viewers_count,
rating decimal(3,2), moderation_status, created_at

-- webinar_registrations
id, webinar_id FK CASCADE, user_id NOT NULL, reminded boolean, attended boolean
UNIQUE(webinar_id, user_id)
```

МОДУЛЬ 13: СИСТЕМА

notifications

```

id          uuid      PRIMARY KEY
user_id    uuid      REFERENCES users(id) NOT NULL
type        text      NOT NULL CHECK (... IN ('money','social','deal','progress','system'))
title       text      NOT NULL
body        text
icon        text
color       text
action_type text      CHECK (... IN ('open_screen','open_url','none'))
action_payload text     -- screen_id или URL
is_read     boolean   DEFAULT false
is_pushed   boolean   DEFAULT false -- отправлен ли push
created_at  timestamp DEFAULT now()

```

INDEXES: (user_id, created_at DESC), (user_id) WHERE NOT is_read. REALTIME: ON

strikes / reports / moderation_queue / verification_requests

```

-- strikes
id, user_id NOT NULL, reason text NOT NULL,
type CHECK ('warning','restrict_24h','restrict_7d','ban'),
evidence_url, issued_by text NOT NULL, expires_at, created_at

-- reports
id, reporter_id NOT NULL, target_type CHECK ('user','post','comment','product','deal','forum_topic'),
target_id, reason_category CHECK ('spam','fraud','abuse','inappropriate','other'),
description, status CHECK ('pending','reviewed','resolved','dismissed'),
moderator_id, resolution_note, created_at, resolved_at

-- moderation_queue
id, item_type CHECK ('expert_card','case','product','webinar','company','post'),
item_id, priority smallint DEFAULT 5 (1=high), status CHECK ('pending','approved','rejected','revision'),
moderator_id, rejection_reason, revision_note, submitted_at, reviewed_at

-- verification_requests
id, user_id NOT NULL, document_type CHECK ('passport','driver_license'),
document_photo_url NOT NULL, selfie_url NOT NULL, document_hash text NOT NULL,
ai_confidence smallint (0-100), ai_face_match boolean,
status CHECK ('pending','auto_approved','manual_review','approved','rejected'),
reviewer_id, rejection_reason, created_at, reviewed_at
INDEX: (document_hash), (status) WHERE status IN ('pending','manual_review')

```

МОДУЛЬ 14: НАСТРОЙКИ И АДМИН

platform_settings / xp_rates

```

-- platform_settings
id, key text UNIQUE NOT NULL, value jsonb NOT NULL,
description, updated_at, updated_by REFERENCES admin_users(id)

-- xp_rates
id, rate decimal(10,6) NOT NULL (0.005000 = 1 XP = 0.005 руб.),
effective_from, created_by REFERENCES admin_users(id), note text

```

admin_users / admin_sessions / admin_audit_log

```

-- admin_users
id, email UNIQUE, password_hash (bcrypt), role CHECK ('superadmin','admin','moderator','analyst'),
name, is_active, two_factor_secret, last_login_at, created_at, created_by

-- admin_sessions
id, admin_id FK, token_hash, ip_address, user_agent, expires_at, created_at

-- admin_audit_log
id, admin_id FK, action text, target_type, target_id,
details jsonb, ip_address, created_at

-- Доступ к admin-таблицам ТОЛЬКО через service_role

```

EDGE FUNCTIONS (19 штук)

+3 НОВЫХ v5.1: auth-telegram-oauth, auth-email, register-push-sub. send-push обновлена.

#	Функция	Триггер	Что делает
1	auth-telegram	POST Mini App	Валидация initData, HMAC-SHA256, создание/привязка user
2	auth-telegram-oauth	OAuth callback	НОВОЕ v5.1: Telegram OAuth для веб/приложений
3	auth-email	POST регистрация	НОВОЕ v5.1: Supabase Auth, email+пароль
4	register-push-sub	POST клиент	НОВОЕ v5.1: Web Push / FCM подписка
5	complete-task	«Выполнить»	Проверка, начисление XP, обновление stats
6	process-deal-payment	Оплата сделки	Списание, предоплата 50%, эскроу 50%
7	accept-deal	«Принять»	Комиссия 20%, перевод эскроу, XP, запрос отзывов
8	purchase-product	Покупка	80% продавцу, 20% платформе, XP
9	purchase-subscription	Подписка	Tribute/Stars, активация, реферальные
10	request-withdrawal	Вывод	Проверка баланса, заявка, push админу
11	process-referral-monthly	CRON 1-е число	15% с подписок рефералов
12	update-streaks	CRON 00:05	Streak ++/reset, бейджи
13	weekly-report	CRON вс 10:00	Статистика, отчёт, push
14	check-frozen-referrals	CRON	7-дн заморозка: разморозка/сгорание
15	expire-subscriptions	CRON	Деактивация, даунгрейд, push
16	send-push	Событие	3 КАНАЛА: Telegram > FCM > Web Push
17	return-chain	CRON	Возвратные сообщения (7 ступеней)
18	auto-accept-deal	CRON час	Автоприёмка >72ч
19	draw-contest	CRON вс 20:00	Seed, победители, XP

send-push — логика 3 каналов (v5.1)

1. Получить user_settings (push_telegram, push_web, push_native)
2. Проверить тихие часы (quiet_hours_from/to)
3. Если пользователь активен <5 мин – только in-app (Realtime)
4. Приоритет каналов:
 - a) Telegram Bot API – если telegram_id AND push_telegram = true
 - b) FCM Native – если push_subscriptions (android/ios) AND push_native
 - c) Web Push – если push_subscriptions (web) AND push_web
5. Обычное: ОДИН канал (a > b > c)
6. Критичное (деньги, сделки): ВСЕ каналы
7. is_pushed = true

verify-document / convert-xp

- ```
-- verify-document
1. Проверить document_hash на дубли
2. AI: сравнение лица (паспорт vs селфи)
3. confidence >= 90% AND match → auto_approved
4. Иначе → manual_review (модератору)
5. approved → is_verified = true, verification_level = 1

-- convert-xp
1. Курс из xp_rates (последний по effective_from)
2. xp_balance * rate = рубли (копейки)
3. balance += рубли, xp_balance = 0
4. transaction (type: 'xp_conversion')
```

## RLS-ПОЛИТИКИ (ключевые)

```
-- users: все видят публичные поля, только свой — редактируют
CREATE POLICY "users_select" ON users FOR SELECT USING (true);
CREATE POLICY "users_update" ON users FOR UPDATE USING (auth.uid() = id);

-- messages: только участники conversation
CREATE POLICY "messages_select" ON messages FOR SELECT USING (
 conversation_id IN (
 SELECT conversation_id FROM conversation_members WHERE user_id = auth.uid()
)
);

-- deals: только client и executor
CREATE POLICY "deals_select" ON deals FOR SELECT USING (
 client_id = auth.uid() OR executor_id = auth.uid()
);

-- transactions: только свои
CREATE POLICY "tx_select" ON transactions FOR SELECT USING (user_id = auth.uid());

-- notifications: только свои
CREATE POLICY "notif_select" ON notifications FOR SELECT USING (user_id = auth.uid());

-- products: все видят approved, автор видит свои
CREATE POLICY "products_select" ON products FOR SELECT USING (
 moderation_status = 'approved' OR seller_id = auth.uid()
);

-- forum: все видят
CREATE POLICY "forum_select" ON forum_topics FOR SELECT USING (true);

-- admin tables: доступ только через service_role (Edge Functions)
-- Никаких RLS для admin_users, admin_audit_log — доступ через отдельный клиент
```

## STORAGE BUCKETS (9)

| Bucket            | Содержимое            | Доступ                          | Макс. |
|-------------------|-----------------------|---------------------------------|-------|
| avatars           | Аватары пользователей | Публичный read, авториз. upload | 5 МБ  |
| task-screenshots  | Скриншоты заданий     | Приватный (автор + модератор)   | 10 МБ |
| verification-docs | Фото паспортов, селфи | Приватный (EF + админ)          | 15 МБ |
| portfolio         | PDF портфолио         | Публичный read                  | 10 МБ |
| products          | Файлы товаров         | Приватный (покупатель)          | 50 МБ |
| product-covers    | Обложки товаров       | Публичный read                  | 5 МБ  |
| company-logos     | Логотипы              | Публичный read                  | 3 МБ  |
| post-media        | Медиа постов          | Публичный read                  | 10 МБ |
| chat-files        | Файлы чатов           | Приватный (участники)           | 20 МБ |

Автоудаление: verification-docs — 30 дней. task-screenshots — 90 дней.

## REALTIME SUBSCRIPTIONS

| Таблица          | Событие | Подписчик              | Зачем                 |
|------------------|---------|------------------------|-----------------------|
| messages         | INSERT  | Участники conversation | Мгновенные сообщения  |
| notifications    | INSERT  | user                   | Badge + toast         |
| transactions     | INSERT  | user                   | Анимация +XP в header |
| deals            | UPDATE  | client + executor      | Статус сделки         |
| task_completions | UPDATE  | user                   | Статус проверки       |

## БЕЗОПАСНОСТЬ

### Шифрование:

- withdrawals.requisites\_encrypted — AES-256, ключ в Supabase Vault
- verification\_requests.document\_hash — SHA-256
- Пароли админки — bcrypt с salt

### Supabase Vault:

- TELEGRAM\_BOT\_TOKEN, TELEGRAM\_BOT\_SECRET, TRIBUTE\_API\_KEY, AES\_ENCRYPTION\_KEY
- VAPID\_PUBLIC\_KEY, VAPID\_PRIVATE\_KEY — HOBOE v5.1: Web Push
- FCM\_SERVER\_KEY — HOBOE v5.1: Firebase Cloud Messaging

**Rate Limiting:**

- Авторизация: 5/мин/IP | Вывод: 3/день/user | Сообщения: 30/мин | Задачи: 10/час | Регистрация: 3/день/IP

**Бэкапы:**

- Ежедневный (Supabase Pro) + еженедельный S3 (CRON)

**Мониторинг:**

- admin\_audit\_log + Supabase Dashboard + Alerting (error > 5% → Telegram)

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44 таблицы | 19 Edge Functions | 9 Storage | 5 Realtime | v5.1 FINAL | 20.02.2026