JANZEER BLOCKCHAIN

Glossary

Terms used across the documentation

Document v1.0 · Janzeer Network · 2026

Janzeer Glossary

Definitions of the terms used across the Janzeer documentation. Each entry shows the Arabic equivalent in parentheses for cross-reference with the Arabic edition. Exact byte-level definitions live in the Yellow Paper.

Core concepts

Blockchain (سلسلة الكتل) — An append-only ledger of blocks, each cryptographically linked to the previous one. Janzeer is a fixed-supply, permissionless, stake-free Layer-1.

Block (الكتلة) — A batch of transactions plus metadata (height, previous-block hash, producer public key, signature) committed to the ledger. Janzeer produces one main block per slot (15 seconds).

Genesis block (الكتلة التكوينية) — The first block(s) that bootstrap the chain and define the initial active validator set. Janzeer also produces a genesis block at each epoch boundary to re-elect the active set; it commits the epoch index, the privileged-anchor count, and the frozen active-validator keys.

Main block (الكتلة الرئيسية) — An ordinary block carrying user transactions and the resulting state, identified by transaction/state/receipt Merkle roots.

Epoch (الحقبة / epoch) — A span of 17,000 main blocks (≈ 3 days at 15-second blocks); at each epoch boundary the active validator set is re-elected.

Slot (الفترة الزمنية / slot) — A fixed 15-second window (12,000 ms active + 3,000 ms intermission) assigned round-robin to one validator who may produce that slot's block.

Accounts & value

Native coin (العملة الأصلية) — Janzeer's unit of value. Fixed maximum supply of 100,000,000, never minted; amounts are tracked to 8 decimal places.

Supply — maximum / circulating (المعروض الأقصى / المتداول) — The hard cap (100,000,000) and the portion outside the treasury (`circulating = max − treasury balance`).

Treasury / bank (الخزينة) — The key-less genesis account `0x0000…0000` holding 77,500,000 pre-allocated coins that pay block rewards and receive the recycled fee share and registration deposits. No one can spend it directly; only protocol rules move it.

Address (العنوان) — A `0x`-prefixed, 20-byte identifier derived as the first 20 bytes of `keccak256(compressed public key)`. The canonical stored/hashed form is all-lowercase hex. (Not Ethereum-compatible — see the Yellow Paper.)

EIP-55 checksum (تدقيق EIP-55) — A display-only mixed-case rendering of an address (each hex letter is uppercased where its keccak nibble is ≥ 8), applied and validated at the

wallet/API boundary. It is presentational, not consensus-relevant; all-lowercase input is always accepted.

Wallet (المحفظة) — Client-side software that derives keys from a recovery phrase and signs transactions. Janzeer wallets are non-custodial.

HD wallet (المحفظة الهرمية الحتمية) — A hierarchical-deterministic wallet: all keys derive from a single seed along the fixed path `m/0/0/0`, so one recovery phrase reproduces every key.

Seed phrase / recovery phrase (عبارة الاسترداد) — A 12- or 24-word mnemonic from which all your keys are derived. It is never stored by the network and cannot be recovered if lost.

Public / private key (المفتاح العام / الخاص) — The secp256k1 key pair derived at path `m/0/0/0`. The private key signs; the public key (compressed, 33 bytes) yields the address and verifies signatures.

Nonce (الرقم التسلسلي / nonce) — A per-account counter included in every transaction to order transactions and prevent replay.

Transactions

Transaction (المعاملة) — A signed instruction submitted to the network. Janzeer has Transfer, Promoter, Exit-Promoter (user) and Reward, Slashing (system) types.

TransferTx (معاملة التحويل) — A transaction that moves coins between accounts, optionally carrying a memo (`data`, ≤ 256 bytes).

PromoterTx (معاملة الترشُّح) — A transaction that registers a node as a validator. It carries the 2000-coin registration deposit (to the treasury) and a fee of 3; there is no vote or approval.

ExitPromoterTx (معاملة إنهاء الترشُّح) — A transaction by which a validator gracefully retires. It removes the validator from the active set and slot schedule at the next epoch boundary. The registration deposit is not returned.

Registration deposit (وديعة الترشُّح) — The fixed 2000-coin amount a PromoterTx sends to the treasury to admit a validator. It is non-refundable and, together with one-seat-per-key, is the primary Sybil guard.

Fee (الرسوم) — The cost of a transaction. 80% goes to the block producer, 20% to the treasury (never burned). Minimums and exact per-type fees are defined in the Yellow Paper.

Signature (التوقيع) — An ECDSA (secp256k1, RFC-6979, low-S, DER, Base64) signature over the transaction's 32-byte hash, proving the sender authorized it.

Hash (التجزئة / hash) — A double-SHA256 digest (lowercase hex) identifying a transaction, block, or state entry.

Merkle root (جذر ميركل) — A single hash summarizing a set of items (transactions, state entries, receipts) so a block can commit to all of them compactly.

Network ID (معرّف الشبكة) — A per-chain string (default `janzeer`) bound into both the signed transaction preimage and the P2P handshake, so a transaction signed for one network cannot be replayed on another.

Mempool (ذاكرة المعاملات المعلّقة / mempool) — The pool of accepted-but-not-yet-confirmed transactions awaiting inclusion in a block.

Native tokens (JZT-1)

Native token / JZT-1 (الرمز الأصلي / JZT-1) — A user-defined fungible token issued on Janzeer. It lives on a separate ledger from the native coin: a token's supply is not part of the coin's fixed 100,000,000 and does not touch emission, the treasury, or rewards. Every token operation still pays its fee in the native coin.

TokenTx (معاملة الرمز) — The single transaction type for all token operations. It carries an `op` byte selecting one of CREATE, MINT, BURN, SETCAP, or TRANSFER.

Token id (مُعرِّف الرمز) — The globally-unique identifier of a token, equal to its CREATE transaction hash. There is no symbol registry (symbols are not unique); the `tokenId` is.

Issuer (المُصدِر) — The validator that created a token. It is the only party allowed to mint, burn, or change that token's cap.

Cap (السقف) — A token's maximum supply. `totalSupply` is always kept within `0..cap`; a SETCAP operation cannot drop the cap below the already-minted supply.

Mint / Burn (السكّ / الحرق) — Issuer-only operations that increase (mint) or decrease (burn) a token's total supply, within the cap.

Decimals (المنازل العشرية) — Display-only precision for a token (0–18). It does not affect on-chain math; token amounts are stored as integer base units.

Base units (الوحدات الأساسية) — The integer on-chain representation of a token amount (like ERC-20 raw units); a displayed amount equals base units divided by `10^decimals`.

Consensus

Consensus (الإجماع) — The rules by which nodes agree on the ledger. Janzeer uses permissionless validator block production in a fixed rotation with two-phase (PREPARE→COMMIT) BFT finality.

Validator (المُصادِق) — A registered node that produces and finalizes blocks. Nodes are admitted permissionlessly by submitting a PromoterTx with the non-refundable deposit — there are no votes and no approval. *Legacy name:* internally the code still calls a validator a "promoter" — the transaction TYPES (`PromoterTx`, `ExitPromoterTx`, `PromoterState`), the config keys (`promoters-count`, `fee-promoter-tx`, `amount-promoter-tx`), and the DB tables (`promoter_state`, `promoter_tx`, `exit_promoter_tx`, `genesis_promoter`) keep that original name, while the REST endpoints and JSON fields now use "validator"; a promoter is exactly a validator.

Registration order (ترتيب الترشُّح) — The election ordering: eligible validators are ranked by `createDate` (registration time), longest-registered first. This replaces the removed rating/vote-weight ordering.

Active set (المجموعة النشطة) — The validators eligible to produce and finalize blocks in the current epoch: still-privileged anchors plus the longest-registered elected validators, filled up to 21, minus offline/banned/exited nodes, with 5 rotating seats.

Fair rotation (التناوب العادل) — The mechanism by which the 5 rotating seats cycle round-robin through the standby candidate pool (up to 100) in registration order, giving overflow validators regular production turns.

Proven independent validator (المُصادِق المستقل المُثبَت) — A non-anchor validator that has produced blocks in every one of the last 2 epochs (`validator-proven-epochs`). Proven independents (not raw registrations) are what allow anchors to phase out.

Anchor (المرساة) — A founding validator defined in the epoch-1 genesis active set. Anchors start privileged (always-in, downtime-immune) but automatically phase out over time.

Anchor phase-out (إلغاء تفعيل المراسي) — The decentralization mechanism: anchors shed their privilege one per epoch (`anchor-demotions-per-epoch`) as proven independent validators come online, never dropping the healthy set below the safety floor. A demoted anchor keeps validating on merit like any registrant; if independents later collapse below the floor, dormant anchors re-engage. The privileged count is committed per epoch in the genesis block.

Safety floor (الحد الأدنى للأمان) — The minimum number of healthy validators (`safety-floor-validators = 4`) below which anchors will not phase out and dormant anchors re-engage.

Reward / block reward / emission (المكافأة / مكافأة الكتلة / الإصدار) — Coins paid from the treasury to a block's producing validator (100%, no commission or delegation split), following a declining schedule plus fee recycling (the "C+D" model). No new coins are minted.

Quorum (النِّصاب) — The vote threshold for finality: `floor(2N/3) + 1` of the N active validators (i.e. "2f+1").

Finality (النهائية) — The point at which a block is irreversible. Janzeer has single-block finality once a COMMIT quorum is reached.

Equivocation (التصويت المزدوج) — A validator signing two conflicting votes for the same slot and stage — a provable fault.

Slashing (المصادرة / slashing) — The penalty for equivocation: after 2 proven offenses a validator is permanently banned; the reporter receives a bounty.

Ban (الحظر) — Permanent removal of a repeat equivocator from validation; a banned validator can never rejoin the active set.

Chain-spec digest (بصمة مواصفات السلسلة) — A double-SHA256 digest over the genesis-pinned consensus parameters. Nodes exchange it in the handshake; a peer whose digest differs is rejected, so an operator who edits any consensus rule forks itself off the network.

Network & operations

Node (العقدة) — Software that maintains the ledger, relays data, and (if it has a valid signing key) produces and votes on blocks.

Peer (النظير) — Another node a given node connects to over the P2P network.

Network (الشبكة) — The set of interconnected nodes. Janzeer peers communicate over an authenticated Netty TCP protocol.

Non-custodial (غير حافظ للمفاتيح) — A design in which only the user holds their keys and seed phrase; the network never sees or stores them and cannot move user funds.

API endpoint (نقطة نهاية الواجهة البرمجية) — A REST URL under `/api/v1/` exposed by a node for reading chain data and submitting transactions.

Document status: v1.0 — reflects Janzeer node version 0.1.0. Byte-level definitions are authoritative in the Yellow Paper.