Boing Network — Features timeline

> 👋 **Everyday users:** what works on public testnet today, what's still gated, and what's deferred.
> 🛠️ **Developers / operators:** factual "when implemented" markers from **git tags**, **activation heights**, and **docs** — not guessed calendar months.

Status vocabulary

Status	Meaning
testnet live	Usable on public chain **6913** at the snapshot tip (or crossed height).
gated	Code shipped; waiting on a **height** or **env** activation.
deferred	Explicitly out of scope / not wired / roadmap only.

Do not invent history. Where evidence is thin, rows say **uncertain** or **approximate**. Prefer heights + release tags over month guesses.

Related: BOING-NETWORK-WHITEPAPER.md (protocol + product whitepaper), BOING-NETWORK-ESSENTIALS.md (plain overview), BOING-NETWORK-TECHNICAL-ESSENTIALS.md (technical companion), BUILD-ROADMAP.md (plan), NEXT-STEPS-FUTURE-WORK.md (backlog).

Current testnet snapshot

*Probed `https://testnet-rpc.boing.network/` on **2026-11-01** (`boing_health` / `boing_getNetworkInfo`). Tip moves — re-check before claiming later gates crossed.*

Fact	Value
Public RPC	`https://testnet-rpc.boing.network/` (Cloudflare Worker → Fly `boing-testnet-1` **only**)
Chain	**6913** / Boing Testnet
Tip (probe)	**1522**
Bootnode	`/ip4/169.155.48.188/tcp/4001` (FLY-IO.md)
`boing-testnet-2`	**Retired 2026-10-24**
Recommended SDK	**`@boing-network/boing-sdk@0.5.38`** (`client_hints`; tag `boing-sdk/v0.5.38` **2026-10-25**)
Recommended wallet	Boing Express **0.1.24** (`client_hints`; min advisory **0.1.18**)
Latest node tag	`testnet-v0.1.24` (**2026-11-01**)
DEX discovery	`boing_listDexPools`, `boing_listDexTokens`, `boing_getDexToken`
Canonical CP pool	Published in `end_user` (ops freeze **2026-05-21**; Fly advertise verified **2026-11-01**) — prefer live `end_user`

Activation heights (testnet 6913)

Height	Feature	Status at tip 1522
400	Open validator set (ops env)	testnet live when set
640	`.boing` name registry (ops env)	testnet live when set
1000	Height-1000 protocol rules	crossed (`testnet-v0.1.16+`)
1050	18-decimal native BOING	crossed (`testnet-v0.1.17`)
1150	Native value on contract calls + related opcodes	crossed (`testnet-v0.1.18`)
1188	Micro fees (`execution_gas_fee_bps=100`)	crossed (`testnet-v0.1.19+` preset)
1200	Media blob Put/Announce admission	live
1306	PHASE7 **256 MiB** consensus cap	live
~1317	Phase 34 HTTP ACL private-by-default	**uncertain on probe** — docs cite 1317; confirm `boing_getMediaBlobParams` / ACL fields before assuming active
1500	Storage-tree v2 + account-tree v3 + VM hardening	**crossed** (2026-10-30; tags `testnet-v0.1.20` / `0.1.21`)
1600	Equivocation slash + strict JUMPI / NATIVE_TRANSFER reporting	**gated** (tip < 1600)
1700	Canonical on-chain QA policy (+ public Unsure pool semantics in `0.1.24`)	**gated**
unset / never	Blake3 opcode `0x20` + fungible v3; governance consensus txs 37–39; BLS committee flip	**gated off** until env height set

1. Protocol / VM

Feature	Status	When / evidence	Confidence
Sparse Merkle state; code/storage in account leaf	testnet live	TECHNICAL-SPECIFICATION.md; NEXT-STEPS “Done”	high
Storage-tree v2 (256-bit key routing)	testnet live	H=**1500**; STORAGE-TREE-V2-ACTIVATION.md; `testnet-v0.1.21` **2026-10-30**	high
Account-tree v3 (256-bit account routing)	testnet live	H=**1500**; ACCOUNT-TREE-V3-ACTIVATION.md	high
VM hardening (init-code QA, mem gas, stack 1024)	testnet live	H=**1500**; live `vm_hardening_activation_height`	high
Strict JUMPI + oversized NATIVE_TRANSFER reporting	gated	H=**1600**; live `vm_jump_strict_activation_height`	high
Native 18-decimal denomination	testnet live	H=**1050**; `testnet-v0.1.17` **2026-10-17**; NATIVE-DENOMINATION.md	high
Native value calls + opcodes `0x31` / `0x34` / `0x47` / `0xf2`	testnet live	H=**1150**; `testnet-v0.1.18`; NATIVE-VALUE-AND-WBOING.md	high
wBOING + custody pools	testnet live	with native value era	high
Micro fee market + optional priority tips	testnet live	H=**1188**; OPTIONAL-PRIORITY-FEES.md	high
Blake3 VM opcode `0x20` + fungible template v3	gated	env `BOING_VM_BLAKE3_OPCODE_ACTIVATION_HEIGHT` unset = never; PR #157 **2026-10-31**	high
Pool v11 first-mint √(A·B)	shipped	new CREATE2 only; no height gate; PR #154	high
L1 media blobs Phases 1–33	testnet live	admission H=**1200**; BOING-L1-MEDIA-BLOBS.md	high
PHASE7 256 MiB consensus cap	testnet live	H=**1306**	high
Phase 34 Grant/Revoke blob download ACL	code live; private-by-default **uncertain**	SDK `boing-sdk/v0.5.38` **2026-10-25**; HANDOFF_BLOB_DOWNLOAD_ACL.md; verify ACL activation on RPC	medium
Phase 34.1 HTTP capability tickets	deferred	HANDOFF ACL “Phase 34.1”	high

Feature	Status	When / evidence	Confidence
ReservedRealV1 DAS verify (IPA/KZG/SNARK)	deferred / NotWired	media Phase 33 notes	high
BLS committee flip (tx 32→33 multi-pin)	gated	env unset	high
Name registry `.boing`	testnet live	H=**640** when ops set env	high
Height-1000 protocol rules	crossed	`testnet-v0.1.16+`	high

2. Consensus / governance

Feature	Status	When / evidence	Confidence
HotStuff multi-validator MVP	testnet live (ops often single-validator)	NEXT-STEPS; RUNBOOK multi-validator section	high
Stake-derived validator epochs + unbonding	opt-in done	RUNBOOK §8.1; NEXT-STEPS	high
Open validator registration	testnet live	H=**400** when set; TESTNET-VALIDATOR-GUIDE.md	high
VRF leader election (ECVRF + gossip)	opt-in done	NEXT-STEPS	high
Equivocation + liveness slashing (+ appeals)	code live; **ReportEquivocation consensus slash gated**	H=**1600** for slash activation; ENVIRONMENT-VARIABLES	high
Operator governance RPC (propose / vote / cooling / execute)	testnet live	node-local `governance.json`; RPC-API-SPEC	high
Stake-weighted quorum (`strict_quorum`)	shipped	PRs #153 / #149; GOVERNANCE-CONSENSUS-TX-ACTIVATION.md	high
Governance consensus txs 37–39 + StateStore registry	gated	wire shipped; admission off until height set; PR #156 **2026-10-31**	high
AdvanceExecution / Execute as consensus wire; BLS ballots	deferred	GOVERNANCE “Out of scope”	high
Mainnet governance activation	deferred	BUILD-ROADMAP	high

3. QA

Feature	Status	When / evidence	Confidence
Protocol QA Allow / Reject / Unsure + `boing_qaCheck`	testnet live	QUALITY-ASSURANCE-NETWORK.md, QA-GATE-RULES.md	high
Live registry lists on public RPC	often empty / size cap only until policy applied	re-query `boing_getQaRegistry`; intended EN blocklist via apply script	medium (drifts)
Canonical on-chain QA policy	gated	H=**1700**; tags `testnet-v0.1.23` / `0.1.24`	high
Public QA pool for Unsure (review instead of reject)	gated	from **1700** with `testnet-v0.1.24` semantics	high
CREATE2 uses registry `max_bytecode_size` from canonical height	gated	with QA canonical gate	high
Governance of QA rule lists via time-lock	partial / roadmap	BUILD-ROADMAP Phase QA	medium

4. RPC

Feature	Status	When / evidence	Confidence
Core JSON-RPC + method catalog (doc-enforced)	testnet live	RPC-API-SPEC.md; `cargo test -p boing-node` coverage	high
`boing_getNetworkInfo` / `boing_health` activation fields	testnet live	live probe 2026-11-01	high
`client_hints` recommended SDK / wallet	testnet live	live 0.5.38 / 0.1.24	high
DEX discovery triple	testnet live	tag `testnet-v0.1.9` **2026-04-13**	high
`boing_getTokenMetadata` / `boing_listTokens`	testnet live	commits ~**2026-10-28**	high
Media blob RPC suite + `boing_getBlobAccess`	testnet live (with media activation)	RPC-API-SPEC; Phase 34	high
Operator-token fail-closed for operator methods	shipped	~2026-10-24+ security/ops commits	high
Public gateway 6 MiB JSON caps; slim blocks `include_code: false`	ops live	gateway + explorer practice	high
Transaction simulation tip+1 rules	live	`testnet-v0.1.18` era; RPC-API-SPEC	high
`/api/networks` public listing	website live	NETWORKS-API.md	high

5. Wallets (Express)

Express has no git tags in this workspace; versions from `extension/manifest.json` + commits.

Feature	Status	When / evidence	Confidence
Boing Express **0.1.24** (clearer approve/swap intent)	testnet live / recommended	manifest + `client_hints`; docs PR #33 **2026-11-01**	high
PutBlob publish sessions (`boing_requestPutBlobSession`)	Express-side UX	not node RPC; Express docs ~0.1.22	high
Chain-bound v2 signing + 18-decimal awareness	from **0.1.18** (min_wallet)	live `client_hints`; Express **2026-10-17**	high
Native value call UX	**0.1.19**	Express **2026-10-17**	high
Priority tip UX	**0.1.21**	Express **2026-10-21**	high
`.boing` names in popup	**0.1.13**	Express **2026-10-16**	high
BIP-39 / SLIP-0010 recovery	shipped	pre-0.1.24 history	medium (first version approximate)
Incentivized testnet UX	not running	Express 0.1.23 wording; BUILD-ROADMAP	high

6. DEX / Finance

Feature	Status	When / evidence	Confidence
Native CP AMM (swap / add / remove, 30 bps, Log2)	testnet live	NEXT-STEPS NAMM; NATIVE-AMM-CALLDATA.md	high
Adjustable-fee / fee-on-input pool versions	shipped in VM templates	NEXT-STEPS	high
Native DEX factory (`register_pair`, Log3)	testnet live (when deployed/published)	NATIVE-DEX-FACTORY.md; live `end_user` factory	high
Ledger / swap2 / multihop routers	in-repo + testnet when published	NATIVE-DEX-* docs; live end_user ids	high
L1 discovery RPCs	testnet live	since `testnet-v0.1.9` **2026-04-13**	high
Native-dex-indexer Worker + D1 directory	in-repo worker	HANDOFF_NATIVE_DEX_DIRECTORY_R2_AND_CHAIN.md	high
Canonical testnet pool publish	testnet live	ops **2026-05-21**; Fly `end_user` verified **2026-11-01**	high
Finance Swap → default CP; Pools + Smart route	product live pattern	finance `native-dex.md`	high
SDK `@boing-network/boing-sdk@^0.5.38`	published	tag **2026-10-25**; CHANGELOG	high
Planet-scale DEX subgraph / OBS-1 history	deferred / partial	NEXT-STEPS indexer	high

Capability overview: BOING-NATIVE-DEX-CAPABILITY.md. Ops publish hub: OPS-CANONICAL-TESTNET-NATIVE-AMM-POOL.md.

7. Observer

Feature	Status	When / evidence	Confidence
Explorer on public testnet RPC	live	default `https://testnet-rpc.boing.network/`	high
Same-origin `/api/rpc` proxy + 6 MiB caps	live	observer ops docs	high
Phase 34 blob download via `/api/blob/download`	shipped	wallet proof primary; HANDOFF ACL	high
Token naming from node + LP vault decode	shipped	observer commits **2026-10-28**	high
Readable tx summaries (approve/swap/transfer/LP)	shipped	**2026-10-28**	high
Storage-tree v2 status vs head on home	shipped	**2026-10-26**	high
Hosted durable observer (OBS-1) at product scale	deferred / partial	OBSERVER-HOSTED-SERVICE.md; NEXT-STEPS	high
Universal contract deploy indexer worker	in-repo stepping stone	HANDOFF_Universal_Contract_Deploy_Indexer	medium

8. Ops / infra

Feature	Status	When / evidence	Confidence
Fly `boing-testnet-1` hosted node	live	FLY-IO.md	high
`boing-testnet-2` retirement	done	**2026-10-24**	high
Public RPC gateway Worker	live	FLY-IO; edge policy enforce since **2026-10-28**	high
Fresh-node genesis→tip sync presets	shipped	`testnet-v0.1.19` **2026-10-28** (micro 1188, blobs 1200, PHASE7 1306, …)	high
P2P signed-tx gossip + per-IP caps	done	NEXT-STEPS; RUNBOOK	high
Desktop Network Hub	latest tag `desktop-hub/v0.1.27` **2026-04-07**	tags; Authenticode still docs/readiness	high
DHT / WebRTC / incentivized relays	deferred	BUILD-ROADMAP unchecked	high
Light clients / bridges / cross-chain	deferred	BUILD-ROADMAP	high
Mainnet launch	deferred	BUILD-ROADMAP	high
Incentivized testnet program	not currently running	TESTNET Part 3 planning only	high

Operator hub: TESTNET-RPC-INFRA.md. Day-to-day: RUNBOOK.md.

Release tags (selected)

Date	Tag	Notable (from tag message / docs)
2026-11-01	`testnet-v0.1.24`	Public QA pool semantics from block **1700**
2026-10-31	`testnet-v0.1.23`	Canonical on-chain QA policy from **1700**
2026-10-31	`testnet-v0.1.22`	Jump-strict / equivocation gate era (**1600**)
2026-10-30	`testnet-v0.1.21` / `0.1.20`	Storage/account/VM hardening at **1500**
2026-10-28	`testnet-v0.1.19`	Fresh-node sync; micro **1188**, blobs **1200**, PHASE7 **1306**
2026-10-25	`boing-sdk/v0.5.38`	Phase 34 blob ACL
2026-10-17	`testnet-v0.1.18` … `0.1.16`	Native value **1150**, 18-dec **1050**, height-1000 rules
2026-04-13	`testnet-v0.1.9`	DEX discovery RPC
2026-03-26	`testnet-v0.1.0`	Early public testnet node line

Full tag list: `git tag --list 'testnet-*' 'boing-sdk/*' 'desktop-hub/*'`.

Explicitly not yet / deferred

- Height **1600** / **1700** gates (tip 1522 on 2026-11-01 probe).
- Env-gated forever until set: Blake3 opcode, governance consensus txs 37–39, BLS committee flip, mainnet tree activations.
- Phase 34.1 capability tickets; real ReservedRealV1 DAS verification; practical non-inline multi-hundred-MiB Put plane.
- OBS-1 durable explorer at planet scale; DHT/WebRTC; bridges; light clients; mainnet.
- Incentivized testnet rewards program (not running).
- Many vision items in DEVELOPMENT-AND-ENHANCEMENTS.md / BUILD-ROADMAP unchecked rows — **not** claimed shipped here.

Boing Network — Quality, enforced by the protocol. Last factual refresh: 2026-11-01.