POSITION CLARITY · FIELD GUIDE

Why *Public* Networks

The difference between a private network and a public one, what each is genuinely good at, and the jobs only an open network can do. Built for understanding, not advice.

Private Public Trust Verification

Position Clarity

An educational reference. Made in Canada.

POSITION CLARITY

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SECTION 01

Two kinds of networks

The word blockchain covers two very different things: systems a company runs behind closed doors, and systems that no single party runs. This guide is about telling them apart.

Ledger. A record of who owns what, and of every transfer that changed it. Your bank statement is a page from your bank's ledger.

Blockchain. A ledger kept by a network of computers at once, rather than by one bookkeeper, with new entries added in linked batches called blocks.

Network and nodes. The computers, called nodes, that each keep a copy of the same ledger and check new entries against the rules.

Private, or permissioned, network. A network with an operator who decides who may join, read, and write. Every participant is known and approved. A bank's systems follow the same control model: one operator decides who connects.

Public, or permissionless, network. A network anyone can join, read, and check without asking. There is no operator and no application form. Bitcoin and Ethereum are public networks.

Gatekeeper. Whoever can grant or refuse access. Private networks have one by design. Public networks are built so that no one can hold that role.

Reading the picture. Left: approved members connect through the operator, who keeps the record; an outsider needs the operator's permission to join or even to look. Right: an open mesh where every node keeps and checks its own copy of the record; a new node simply joins. Neither picture is the "good" one; they are built for different jobs.

SECTION 02

What a private network does well

Private is not a flaw. Nearly every record that runs your life lives on a private network: banking, payroll, land titles, health records. They do their jobs well, and the case for public networks has to start by admitting that.

THE STRENGTH	WHY IT WORKS
Fast and cheap	*One operator with known members can process enormous volumes without every computer repeating the work.*
Private by default	*Your balance and history are visible to the operator and to you, not published to the world.*
Someone to call	*A fraudulent charge can be reversed, a locked account can be recovered, and a mistake has a help desk.*
Accountable under law	*The operator is a real institution with regulators, auditors, and legal obligations to its members.*
Fixable	*Rules can be updated and errors corrected, because one party has the authority to do it.*

Institutions use permissioned blockchains too. Frameworks such as Hyperledger Fabric let a group of known companies share one ledger among themselves. In Canada, the Bank of Canada and Payments Canada tested the same permissioned approach, on different platforms, for settling (completing) payments between banks, in a research project called Jasper that ran from 2016 to 2019. The same technology family as Bitcoin, but with a members-only door.

WHERE YOU ALREADY RELY ON THIS

Your chequing account, an Interac e-Transfer, the provincial registry that records who owns your home, your CRA My Account: every one is a private network, run by an operator you can phone when something goes wrong. Naming them is not a criticism. It is a way to see the model plainly, because the same five strengths are exactly what a public network gives up.

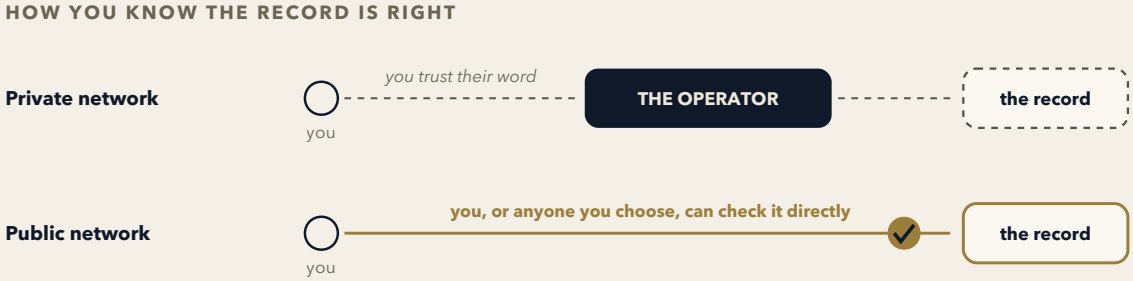
THE ONE LINE

A private network is a record with an owner. That ownership is its strength, and the question the next section asks.

SECTION 03

The question underneath

If private networks work this well, why build public ones at all? Because every private network rests on one assumption: that everyone using it trusts the operator. The two designs are really two answers to a single question. How do you know the record is right?



Reading the picture. In a private network, the record sits behind the operator. You know your balance is right because the institution says so, and because law and audit stand behind its word. In a public network there is no one to take at their word. Instead, anyone can hold the full record and check every entry against the rules, directly. Trust the operator, or verify for yourself: that is the real dividing line, and everything else about the two designs follows from it.

> *A private network works wherever everyone involved already trusts the same institution. A public network exists for every situation where they do not, or cannot.*

Neither answer is free. Trusting an operator costs you independence. Verifying for yourself costs speed and convenience. The next two sections price out each side.

THE ONE LINE

Trust the operator, or verify for yourself. Every trade-off in the next two sections is the price of one answer or the other.

SECTION 04

What only a public network can do

These are the jobs a private network cannot take on, no matter how well it is run, because each one requires that no gatekeeper exists.

Anyone can verify. No account, approval, or membership is needed to run a node and check the entire record. The books are open to the public in a way no institution's books are.

No one can be turned away. A private network can refuse a member. A public one has no door to refuse them at. Two strangers with no bank, legal system, or institution in common can still exchange value with each other.

Censorship resistance. The property that no single party can quietly block or rewrite a valid entry. On a public network, stopping or changing the record means overpowering the whole network at once, not persuading one operator.

No single point of failure. A private network lives or dies with its operator. A public one survives any one company, server, or country going offline, because independent copies of the record exist around the world.

Final settlement, no intermediary. Settlement is the point where a transfer is complete and will not be undone. On a public network the transfer itself is the settlement: once the network has confirmed it, reversing it becomes impractically expensive, and more so with every passing block. There is no separate promise between institutions to square up later.

Always on. The network has no business hours. Transfers confirm on nights, weekends, and holidays, because there is no institution whose doors need to be open.

BEING HONEST ABOUT WHO NEEDS THIS

In a country with stable banks and courts, these properties can look abstract. They matter most where institutions are weak, where accounts get frozen for political reasons, or where money must cross borders that institutions will not. For everyone else, what a public network offers is the standing option: a system that keeps working even if trust in an operator someday fails.

SECTION 05

What public networks pay for it

Openness is not free. Every property in the last section is bought with a cost. This section names each one.

THE COST	WHAT IT MEANS IN PRACTICE
Slower and more expensive	*Many independent nodes repeat the same checking work, and busy periods congest the network itself, bringing fees and waits of a kind a private network does not have.*
Real resources spent on security	*Bitcoin's record is protected by proof of work, a system where computers spend real electricity to make rewriting history impractically expensive. The spend is the security, and it is genuinely large. Other public networks secure the record differently, such as proof of stake, where locked-up funds stand behind the rules instead of electricity. The cost changes form; it does not disappear.*
No help desk	*Irreversibility cuts both ways. A transfer to a wrong address, the string of characters that tells the network where value goes, generally cannot be recalled, and no operator exists to appeal to.*
The record is public	*Transactions are pseudonymous, tied to addresses rather than legal names. On the major public networks, such as Bitcoin and Ethereum, the full history of every address is visible to anyone. A few public networks shield transaction details; they are the exception.*
You carry the responsibility	*Without an operator, holding directly means safeguarding your own access and recovery. That responsibility does not suit everyone, and platforms (companies that hold crypto for their customers) exist precisely because of it.*

None of these costs is a hidden defect. They are the price of removing the gatekeeper, paid on purpose. One consequence is worth naming: an account on a crypto platform is itself an operator relationship. The asset lives on a public network, while your access to it runs through a private one, and that access carries an operator's properties in both directions: mistakes can be reversed, and access can be refused. The question is never which design is better, but whether a given job needs what the openness buys.

SECTION 06

When each one fits

Read these as descriptions of fit, not as recommendations. The pattern is simple: the more everyone involved already trusts one institution, the better a private network serves them. The less shared trust there is, the more a public network is the only design that works at all.

THE JOB	WHERE IT TENDS TO SIT, AND WHY
Everyday payments inside one institution	*Private systems. Everyone involved already trusts the bank, so speed, reversibility, and a help desk win.*
Shared records among companies that know each other	*Permissioned blockchain. The members want one shared ledger without publishing it to the world.*
Holding an asset no single company controls	*Public network. Only a system without an operator can make that promise in the first place.*
Value crossing borders without a shared institution	*Public network. When the two sides share no bank or legal system, the open network is the meeting point.*
A record outsiders must be able to audit without permission	*Public network. Open verification is the property being bought.*
Your own crypto, held directly or through a platform	*Both at once. The asset lives on a public network, while a platform account reaches it through a private, operated one. Knowing which layer you are standing in is most of the clarity.*

THE BOUNDARY, STATED PLAINLY

This guide explains why both kinds of network exist and what each is for. It does not say which networks or assets belong in your life, and it does not treat "public" as a reason to own anything. Whether any of this fits your situation is a decision for you, with qualified professionals where money, tax, or law is involved.

END MATTER

Where to go from here

NEXT STEP

The Position Clarity Review turns this distinction into a written position on your own holdings: which live on public networks, which sit with an operator, and what each arrangement asks of you, for $197.

Sources and further reading

- Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System (2008), including section 10 on privacy (retrieved 2026-07-05)
- Ethereum Foundation: Nodes and clients (retrieved 2026-07-05)
- Ethereum Foundation: Proof-of-stake (PoS) (retrieved 2026-07-05)
- Bank of Canada: Fintech experiments and projects (Project Jasper) (retrieved 2026-07-05)
- Hyperledger Fabric documentation: What is Fabric (permissioned blockchains) (retrieved 2026-07-05)
- Monero project: About Monero (a public network that shields transaction details) (retrieved 2026-07-05)
- Cambridge Centre for Alternative Finance: Bitcoin Electricity Consumption Index (retrieved 2026-07-05)

Public and private are used here as technical control models (who may join, read, and write), not as judgments of quality.

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