

# SFU selection cheat sheet

mediasoup · Janus · LiveKit · Jitsi Videobridge · Pion — pick the right WebRTC media server for your product in 2026.

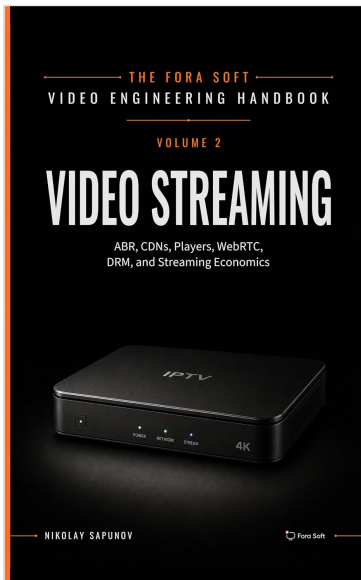
| Criterion              | mediasoup               | Janus                      | LiveKit                     | Jitsi VB                    | Pion               |
|------------------------|-------------------------|----------------------------|-----------------------------|-----------------------------|--------------------|
| Language               | C++ engine, Node.js     | C                          | Go (on Pion)                | Kotlin / Java               | Go (library)       |
| License                | ISC                     | GPLv3                      | Apache 2.0                  | Apache 2.0                  | MIT                |
| Signalling             | You write it            | HTTP / WS / MQTT to plugin | First-party gRPC + WS       | Colibri2 over XMPP (Jicofo) | You write it       |
| Scale per node         | ~500 consumers / worker | Hundreds / instance        | Cluster-scaled (Redis mesh) | ~1,000 streams / bridge     | Whatever you build |
| Multi-region cascading | No (use pipeToRouter)   | App-layer (DIY)            | Yes — built-in mesh         | Yes — Octo / relay          | DIY                |
| Recording              | Not included            | recordplay plugin          | Egress service              | Jibri service               | Not included       |
| SIP gateway            | Not included            | sip plugin                 | Built-in (2025)             | Jigasi                      | Not included       |
| AI agent framework     | Not included            | Not included               | Yes — Agents 1.5+           | Not included                | Not included       |
| Time to first call     | Weeks                   | Days to weeks              | Hours                       | Hours (deploy stack)        | Months             |
| Best when              | Engine, not product     | SIP/RTSP/WebRTC in one     | Ship fast; AI agents        | Turnkey conferencing        | Custom Go SFU      |

## Decision tree (in order)

- **Question 1.** Do you need a turnkey Jitsi-Meet-shaped product (web client included, brand and deploy)? → [Jitsi Videobridge](#) (with Jicofo + Prosody + Jitsi Meet web client).
- **Question 2.** Do you need SIP, RTSP, or other cross-protocol bridging from the same media server? → [Janus](#) (videoroom + sip + streaming + recordplay plugins).
- **Question 3.** Otherwise — pick by team strength and roadmap: ship fast with AI agents → [LiveKit](#); Node.js shop, total control of signalling and media plane → [mediasoup](#); Go shop with bespoke server-side requirements willing to invest 12+ months → [Pion](#).

## Five pitfalls every team hits

- **Forgetting TURN.** All five SFUs assume coturn (or equivalent) exists; 10–25% of clients need a relay. Budget the bandwidth.
- **Underestimating signalling.** mediasoup and Pion leave signalling to you. Auth, room membership, simulcast layer selection, breakout-room state — it's a project.
- **Picking by docs friendliness.** LiveKit reads beautifully, but if your product is not conferencing-shaped, the data model becomes friction.
- **Assuming recording is free.** Composite vs per-track vs raw RTP are three different products. Decide early; switching later means re-deriving from raw RTP.
- **Skipping observability.** No SFU emits dashboard-ready stats on day one. Plan to wire Prometheus + Grafana + per-client getStats() before launch.



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This sheet compares mediasoup, Janus, LiveKit, Jitsi Videobridge and Pion and walks a three-question decision tree. Volume 3 covers WebRTC and real-time delivery in depth, plus QoE monitoring, CDN and relay costs, and the economics of running media servers at scale.

### WHAT YOU WILL FIND INSIDE

- WebRTC architecture and SFU topologies
- QoE monitoring for real-time calls
- TURN, relays and delivery costs
- Economics of media servers at scale

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