# Virtual-Classroom Reference Architecture Readiness Checklist

Pressure-test all four planes of a live-learning platform — plus the LTI/xAPI bridge, the scaling tier, and the recording path — before you commit a budget.

## A. Control plane — identity & rooms

- ☐ Roles and permissions defined for your classroom type (1:1, seminar, lecture)
- ☐ Identity delegated from the LMS via LTI 1.3 launch — no second login
- ☐ Signaling separated from the media path (WebSocket or WHIP/WHEP)

## B. Media plane — pick the scaling tier

- ☐ Tier chosen: P2P (1:1) · single SFU (≤50) · SFU+simulcast (lecture) · cascade (10K+)
- ☐ SFU buy-vs-self-host decided; cascade plan exists for your largest session

## C. Shared-state plane — breakout & whiteboard

- ☐ Breakout/whiteboard/chat state lives off the media server, on its own transport
- ☐ Whiteboard uses a CRDT (Yjs/Automerge) with instant local ink

## D. Learning bridge — what makes it a classroom

- ☐ LTI 1.3 launch + NRPS roster sync wired in
- ☐ AGS grade passback modeled before activities are built; xAPI events to the LRS

## E. Recording & accessibility path

- ☐ Recording-to-catalog pipeline defined; live captions upgraded to prerecorded standard
- ☐ Completion rule chosen — attendance, participation, and 'watched' kept distinct

Companion to: 'Live-Learning Reference Architecture: The Full Picture'
www.forasoft.com/learn/elearning-video/articles-elearning/live-learning-reference-architecture




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This checklist pressure-tests the control, media, shared-state and learning planes of a live classroom. We wrote seven volumes on the video stack under it: Volume 3 covers WebRTC, SFUs and delivery, Volume 4 audio and captions, and Volume 1 encoding for recordings.

### WHAT YOU WILL FIND INSIDE

- WebRTC, SFU and simulcast scaling
- Voice processing for classrooms
- Live captions and accessibility
- Encoding recordings for the catalog

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## Planning a live-learning platform wired into your LMS?

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