RealtimeKit

- What you can build
- How RealtimeKit fits into your app
- Key features
- Choose how to build
  - RealtimeKit UI Kit
  - RealtimeKit Core SDK

import { CardGrid, Description, Feature, LinkButton, LinkTitleCard, } from "~~/components"; import RealtimeKitArchitecture from "~~/components/realtimekit/RealtimeKitArchitecture/RealtimeKitArchitecture.astro";

Cloudflare RealtimeKit lets you build your own audio and video experiences inside web and mobile apps. It routes media on [Cloudflare's global WebRTC infrastructure](/realtime/sfu/concepts/architecture/), so you can deliver low-latency experiences to a global audience without scaling media servers or choosing regions.
Your application controls who can join and what they can do. RealtimeKit provides the SDKs and infrastructure that connect participants inside your web or mobile app.

Get started Try a demo meeting View code examples Run a pre-call test

What you can build

<LinkTitleCard title="Group video calls" href="/realtime/realtimekit/quickstart/" icon="ph:video-camera"

> “

```
Add multiparty calls to collaboration tools, customer portals, and online communities.
```

<LinkTitleCard title="Virtual classrooms" href="/realtime/realtimekit/humans/ui-kit/breakout-rooms/" icon="ph:graduation-cap"

> “

```
Split a class into smaller discussion rooms and assign participants
automatically or manually.
```

<LinkTitleCard title="Webinars and live events" href="/realtime/realtimekit/webinar/" icon="ph:broadcast"

> “

```
Keep attendees view-only until a host grants them access to the stage.
```

<LinkTitleCard title="Audio rooms and support calls" href="/realtime/realtimekit/audio-calls/" icon="ph:headset"

> “

```
Build voice-only sessions for support lines and community discussions.
```

How RealtimeKit fits into your app

Your application owns users and workflows, while RealtimeKit manages sessions and media.

Key features

<Feature header="Participant roles and permissions" href="/realtime/realtimekit/concepts/preset/" cta="Configure presets"

> “

```
Give hosts, speakers, and attendees different permissions for media,
moderation, and in-meeting features. Reuse the same presets across meetings.
```

<Feature header="Recording and custom layouts" href="/realtime/realtimekit/recording-guide/" cta="Explore recording"

> “

```
Capture composite video or separate participant audio tracks. Store recordings
in [your own Cloudflare R2
bucket](/realtime/realtimekit/recording-guide/custom-cloud-storage/#cloudflare-r2),
```

```
or deploy a [custom recording
app](/realtime/realtimekit/recording-guide/create-record-app-using-sdks/) on
[Cloudflare Workers](/workers/) when you need a different layout.
```

<Feature header="Transcription and summaries" href="/realtime/realtimekit/ai/" cta="Add meeting AI"

> “

```
RealtimeKit uses [Cloudflare Workers AI](/workers-ai/) for real-time and
post-meeting transcription. Generate an AI summary when a meeting ends.
```

<Feature header="In-meeting apps" href="/realtime/realtimekit/custom-plugins/" cta="Build a plugin"

> “

```
Add your own browser-based, interactive apps such as whiteboard, document
viewer into the meeting layout. Use the [meeting key-value
store](/realtime/realtimekit/collaboration/meeting-key-value-store/) to
synchronize plugin state across participants.
```

<Feature header="Backend automation" href="/realtime/realtimekit/webhooks/" cta="Handle lifecycle events"

> “

```
Receive signed meeting, participant, and recording events in your backend. A
[Cloudflare Worker](/workers/) can verify each callback and start post-meeting
processing.
```

Choose how to build

RealtimeKit gives you two ways to build the client experience. Choose based on how much of the interface you want to build yourself.

RealtimeKit UI Kit

Use RealtimeKit UI Kit when you want prebuilt screens and controls for joining and running a call. It includes the setup screen, participant grid, media controls, chat, and polls. Use the default layout

or customize individual components and branding.

RealtimeKit UI Kit includes RealtimeKit Core SDK, so you can use its APIs when prebuilt components don't cover your workflow.

RealtimeKit Core SDK

Use RealtimeKit Core SDK to build every screen and interaction yourself. It provides direct access to session, participant, and media state while RealtimeKit manages signaling and media routing.

Compare supported platforms and packages in SDK selection.

□□□ #2
□ □□□ □□□ 2026-11-01 03:43:16 UTC
□ □□□ □□□ 2026-11-01 03:43:17 UTC